BIBLIOGRAPHICAL NOTICES.

Art. XV.—*Elements of Medical Jurisprudence.* By Theodric Romeyn Beck, M. D., LL.D., Prof. Mat. Med. in the Albany Medical College, &c. &c., and John B. Beck, M. D., Prof. Mat. Med. and Med. Jurisp. in the College of Physicians and Surgeons of the City of New York, &c. &c. Tenth edition. Vols. I. and II. Albany, Little & Co. 1851: 8vo. pp. 866—948.

Medical Jurisprudence. By Alfred S. Taylor, F.R.S., &c. &c. Second American, from the Third London edition; with Notes and Additions by R. Eglesfeld Griffith, M.D., &c. Philadelphia, Lea & Blanchard, 1851: 8vo. pp. 670.

We have placed above, the titles of the two best treatises on medical jurisprudence in our language; both of them new editions of standard works, and both of them bearing unmistakeable evidence of the industry, and research, and discrimination of their authors. It would be difficult to enter upon a discussion of their relative merits in the space allotted to us, nor do we feel at all inclined at this late date to say, where each has so much merit, that one is better than the other. We are perfectly satisfied that either one contains an amount of information which will place the reader in full possession of the elements and practical bearings of the science of which it treats.

Since the publication of the previous American edition of Dr. Beck's classical work, medical jurisprudence has made rapid strides in advance; and one of the best proofs of the fact is contained in the introduction to this edition, viz., that the authors found it necessary to add several hundred pages to their last London edition, in 1842, of which this was at first intended to be merely a reprint. The pages of this Journal, for years past, have borne constant evidence of the untiring and *inevitable* research of Dr. T. R. Beck, whose observations and extracts from foreign and domestic sources have filled that portion of it devoted to medical jurisprudence; and the writer of the present notice bears his testimony to the same effect; for, having taken much interest in the subject, and consequently had occasion to examine the journals, he found it almost impossible to furnish a single novelty to this department in which he had not been anticipated by Dr. Beck. It is almost unnecessary to say that the materials collected by Drs. Beck have been skilfully used, and have been arranged in such a form as to make their work worthy of the period at which it is published.

In one respect we are inclined to be at the same time pleased and fault-finding, and this is in the typography and getting up of these volumes. While the clear type, white paper, and large spaces and margin make them readable, they are too bulky for every day use, a fault in which our publishers are beginning to emulate those of former times, giving us, instead of folios and quartos, royal octavos quite as cumbersome and unhandy. This, however, is a fault of the dress, not of the matter.

Mr. Taylor's work has passed through three editions in Great Britain, and a second one has been called for by the demands of this country; a portion of it, that on poisons, having been previously reprinted from the author's separate work upon that subject.

In each successive edition, Mr. T. has brought down to the period at which they were written, the facts of the science, and the decisions upon the interesting questions involved in medico-legal investigations, corrected by more enlarged experience and matured judgment; and in the volume before us has presented an admirable and well-arranged treatise, in which both the physician and lawyer can find abundant information upon the subjects discussed, well digested, succinctly and clearly stated, and—as justly said by the late and lamented American editor—"of an eminently practical character." It is an excellent text-book, and yet takes a much higher range than such books generally do.

We cannot close this notice without a brief allusion to the loss which science has met with in the somewhat recent death of the American editor, Dr. Griffith. He was too well known in this community to require a eulogy at our hands, for the greater part of his life was passed here, and the evidences of his laborious habits are to be found in the interesting papers contributed to this Journal and the able works he has published—in the professorial chairs which he filled both here and elsewhere—and in the valuable contributions he has made to various departments of natural history; for in many of these, as botany, conchology, and mineralogy, he was surpassed in acquirements by few. He was exceedingly industrious in his habits, untiring in his zeal for knowledge, remarkably retentive in his memory, reading everything and stowing away for future use, and yet not selfishly gloating over the treasures he had discovered. Such a course would have ill suited one of his cheerful and animated disposition. He loved society both for the instruction and pleasure he derived from social intercourse, and because it gave him an opportunity to impart to others the knowledge he had himself acquired, and which he felt constrained to scatter about him as an outpouring of his own good heart for the benefit of others. He has left behind him the enviable reputation of having contributed to the extent of his ability—and that no mean one—to the cause of science; and we can only regret that his labours are ended at a time when she might have reaped from them still larger benefit. C. R. K.

ART. XVI.—*A History of the Disease usually called Typhoid Fever, as it has appeared in Georgetown and its Vicinity; with some Reflections as to its Causes and Nature.* By W. L. SUTTON, M. D., Georgetown, Ky., Maxwell & Co., Louisville, 1850: 8vo. pp. 127.

DR. SUTTON has presented, evidently with great candour, the result of his personal observations upon the particular form of disease which appeared in Georgetown and its vicinity, during the last six years, and believed by him to be identical with the typhoid fever of Louis. Even by those who shall reject as erroneous the remarks of the author in relation to the true character of the disease of which he treats and of typhoid fever generally, the work before us must be considered as one particularly interesting, inasmuch as, admitting his diagnosis to be correct, he has shown very conclusively that enteric fever may occur, in the form of an extensive endemic, unattended by some, at least, of what have been considered its characteristic symptoms.

It is to be regretted that Dr. Sutton was able to make an examination after death in only three of the fatal cases which occurred during the period over which his observations extend. In each of these cases disease and ulceration of the intestinal glands were present. In the first case:—

"The small intestines were red internally throughout their course; near the ilio-cœcal valve they were more highly coloured externally, and internally presented elliptical plates distinctly elevated, and some of them ulcerated in numerous distinct minute points: solitary glands distinctly thickened, and some of them ulcerated; the mucous membrane considerably injected, having veins, distended with dark blood, interspersed."

The liver was "apparently healthy;" spleen not examined.

In the second case, the liver, also, showed no indications of disease; but the spleen was enlarged, almost globular in shape, very red, "and much softened; breaking down under the handling." In the lower portion of the ileum, "several elliptical patches and solitary glands were found slightly ulcerated, without apparent thickening or diminution of the walls."

In the third case:—

"The stomach was moderately distended with air and a little fluid; externally and internally healthy, if we except a small spot just below the central depression, which exhibited a group of innumerable minute red specks, as if the point of a fine needle had been repeatedly applied. The small intestines in various places appeared diminished in volume, otherwise sound until we approached the lower end of the ileum, where externally it was dark and contracted. Upon laying it open, a number of ulcers were to be seen, varying in size, some not larger than a grain of wheat, others larger than a twenty-five cent piece. They extended to the peritoneal coat. In some of the smaller ulcers, the edges were thickened; in the larger, there was no thickening of the edges. The intermediate spaces were filled with enlarged veins containing dark blood. Near the ilio-cœcal valve there were some large, very irregularly shaped ulcerations. In the cœcum and upper part of the colon, were similar ulcers, also near the anus. The colon externally was of a healthy colour, but very much diminished in calibre; internally, throughout as dark as a mucous membrane could well be. The rectum in the same condition. Some of the mesenteric glands enlarged. There was very little blood in the vena cava or any of the large veins. Indeed, there appeared to be a very considerable scarcity of blood in the cutaneous veins and those in the cavity of the body. Liver and pancreas healthy. Spleen enlarged and softened."

Dr. Sutton presents a very full history of the disease, as observed by him, from its onset until its termination in convalescence or death. From his remarks on its diagnosis, we extract the following list of symptoms, which are considered by him as those of most importance, presuming that the patient is seen during the first week.

"A tongue whitish, moist, or beginning to become clammy, with red papillæ showing through the white coat, and reddish edges and tips, giddiness, and tinnitus aurium upon rising; more or less uneasiness of the head; tenderness at the epigastrium or right iliac fossa; tympanitic state of the abdomen; diarrhœa, the dejections of a dirty yellowish colour, very liquid and very offensive, of a cadaverous odour, with or without griping; great muscular debility; a pulse increased in frequency, increased or diminished in volume and strength; occasionally a cadaverous smell of the body."

Although, Dr. S. remarks, we may have a case of typhoid fever in which a majority of the above symptoms are absent, or a majority of the symptoms without the fever, yet when "we have something like the assemblage just enumerated, we should be on the look-out for the disease."

The cadaveric smell of the body, Dr. S. has observed in many patients ill of typhoid fever; in others he has not detected it; he has also observed it in patients labouring under various other diseases.

In the disease described by our author, the rose-coloured spots upon the skin were not observed. "I have," he remarks, "examined patients daily, during the whole course of the disease, without finding a single spot. I will add, too, that I have not confined my examinations to a few patients or to a short period. It is my custom to examine all whites."

Of his medical friends of whom he made inquiry upon this point, one only had seen the eruption; it occurred in about one-half of the cases in his practice. In one instance Dr. S. saw them, in a relapse of the disease brought on by indiscretion in eating, they continued for only four days. They were absent in the primary attack.

Dr. S. has found sudamina to occur rather frequently; in perhaps a third of the cases.

It is successive in its eruption, and goes off by leaving very thin scales. "I have seen," he adds, "this eruption continued for several weeks after restoration to health, but most commonly it disappears about the time when convalescence is well established. I have seen one case, at least, in which it did not appear until the patient was in *articulo mortis;* at least, I examined for it in the afternoon without finding it; but at midnight I found the patient dying, with a plentiful eruption upon the neck and lower part of his face."

"Desquamation of the cuticle has been observed something more frequently than sudamina. The scales of this desquamation are too large to have been occasioned by the debris of the sudamina. Its most frequent seat is the chest and back, especially about the loins and sacrum."

Thoracic symptoms of a grave character Dr. S. has rarely observed. He has frequently seen a short, dry cough—"such as is usually denominated stomach or worm cough. Occasionally, there has been a slight rhonchus in respiration. Towards the termination of fatal cases, the respiration becomes more irregular, and sometimes hurried. The irregularity is often more marked in a sudden expiration than in anything else."

Of 43 cases of the disease, 26 occurred in persons between 15 and 30 years; nine in these over 30; and eight under 15. The proportion of whites to blacks was, in the bounds of Dr. S.'s observations, about 108 to 100. Twenty-seven out of 43 cases occurred in males, and 16 in females. Eleven of the cases terminated fatally, and 32 in recovery.

Of 192 cases, there occurred in

Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
3	12	16	8	26	21	21	25	26	17	8	9

Total.	Winter.	Spring.	Summer.	Autumn.
	31	55	72	34

Of these there were males 104. Females 88. Whites 118. Blacks 74.

Forty of the above patients were 40 years old and upwards.

Residents of Georgetown appear to have been equally liable to the disease as were young persons recently arrived there from the country. The population of the town is, however, we are told, stationary to a very great degree. The principal ingress being from students to the schools, male and female, and journeymen mechanics.

"We have," remarks Dr. S., "about two hundred students from a distance. Among these I have not known of more than eight or ten cases of fever in the six years; and I do not know that any one of them had been there less than a year. Neither do I know, with the exception of four, that any case was one of typhoid fever. I presume, however, that some of them were."

Insalubrious dwellings and localities appeared to have been the most common places for the occurrence of the fever; it was not, however, confined to these. In a considerable proportion of cases, the attack of the disease appeared to Dr. S. to have been brought on by an undue exposure to cold.

Dr. S. does not believe that the disease originated in or was propagated by contagion.

"A contagious disease," he remarks, "whose infection may remain dormant in the system for seven months" (the allusions are to facts detailed in the work before us), "or may be quickened into life in as many hours; which may appear in half a dozen members of a family, in as many days, without any chance of introduction from without, and then spread no farther in that family or neighbourhood; which can originate in divers families in the same village or neighbourhood—these families having no communication with each other; which can originate frequently at divers points in the country, and infect but one or a few persons—which, in one word, shall frequently set at naught all the laws of contagion as usually understood, although it may, at times, seem to obey these laws, is a contagious disease which I do not profess to understand. Neither does it seem to me that anything is gained in etiology by calling in the aid of such an agent."

As ordinary sequelæ to the fever described by him, the author enumerates phthisis, in several instances; œdema of the face and limbs; loss of the hair, desquamation of the cuticle; in one case, a very painful affection of the tibia, accompanied by some tumefaction of the integuments, which were, also, exceedingly tender to the touch. In another case, a very painful swelling of the leg, the limb remaining permanently enlarged after the disappearance of the pain.

The disease, as observed by Dr. S., pursued, in general, a protracted course. In two cases, death occurred on the sixth day, from the presumed date of the attack. These, he thinks, were the shortest courses of the fatal cases that have occurred under his notice. In one case, complete convalescence was established on the eighth day. From two to three weeks, Dr. S. lays down as the average duration of the fever. In one case, it continued, however, for six weeks, and in another the patient was confined for twelve weeks or upwards.

"In general," he states, "there is a very gradual aggravation of symptoms for six or eight days; then there are from four to eight days, during which no appreciable change takes place. Then there is a very gradual amendment for five or six days more, and then a more rapid improvement."

It would seem that the severity of the attack had very little to do with its duration.

The following quotation is from the author's section which treats of the prognosis of the disease:—

"Great frequency of pulse, long continued, profuse diarrhœa, quick respiration, especially if performed irregularly; dry, black tongue, profuse hemorrhage at the latter stages of the disease; subsultus tendinum; low muttering delirium; loud raving, great prostration, discharges of flatus, strangury, suppression of urine, restlessness, and an impression of being well when very grave symptoms are present, are among the symptoms indicating great danger. If I were to select three symptoms indicating much peril, I would take a frequent weak pulse, profuse and continued diarrhœa, and a dry black tongue. Whatever other symptoms may be present, I hold that a combination of these is of evil import. I do not now remember a case of doubtful aspect in which one or more of these symptoms were not present, and the converse is true: I do not remember a case in which the three were united which was not a grave case. As one or more of these three, united with other symptoms enumerated as indicating danger, are present, so will the danger of the case be.

"We must remember, however, that there is no disease in which there is more reason to hope against hope. Thus, in a case in which there had been continued diarrhœa, with quick pulse, and great muscular prostration, profuse epistaxis came on in the last stage, and death seemed to be averted only by plugging the nostrils. Yet recovery was at last rapidly effected. It may be proper to notice a case which I saw in 1849. A young gentleman had been very low for more than a week. Among the grave symptoms was free hemorrhage from the bowels. After one of these discharges, he sank very much, his pulse became very frequent, and too weak to be counted, and it seemed as if death must speedily ensue. He seemed at least as low, if not lower than the last patient. Yet he recovered, notwithstanding the continuance of hemorrhage from the bowels for twelve or fifteen hours after. Again, in a case of extreme prostration, profuse diarrhœa, delirium, and where, in truth, the patient was abandoned by his physician, the pulse remaining tolerably steady, recovery took place.

"Thus it is that, in all cases, we must lean to the side of hope. On the other hand, we must not forget that there is another side to the picture. In a few cases in which the disease has apparently been mild, when in fact no very grave symptom has shown itself, when the convalescence is considered as already set in, a perforation of the bowel may take place, and death speedily close the scene. I have seen a case in which, for four weeks, the pulse ranged from 60 to 80, the bowels never much troubled, the tongue nearly natural, no undue heat of skin, indeed no bad symptom occurred, if we except a moderate but obstinate pain in the occiput. During all this time, the patient sat up more or less every day, generally in a room adjoining his bedroom, yet, at the expiration of this time, he began to become deaf, his pulse slowly increased in frequency, his tongue became gradually coated and dry, presently delirium set in, and during the sixth week he died.

"Again, a case may be severe, but improvement may appear to have commenced and continued for two or three days, when an aggravation of symptoms may take place, and the patient steadily grow worse, until a fatal termination ensues. This aggravation may occur without any cause apparent to the physician or nurse. It is frequently charged upon improper indulgence. If this last has been the cause, we may hope, by diligence and attention, to remedy the evil, but if it is not, the prospect is truly gloomy, as I do not remember a case of recovery from this state.

"I have found profuse hemorrhage, in the last stage, much less fatal than I was prepared to expect from reading or reflection. I remembered but ten cases in which it occurred. In two only did death follow. In two cases where I was satisfied a perforation of the bowel had taken place, and when the patient evidently was to live but a few hours, each was impressed firmly with the idea that nothing was the matter. I have found strangury and suppression of urine both to be symptoms of evil import. The patient from whom it was necessary to draw the urine daily for six weeks was the only case of recovery in which either symptom was discovered.

"The case mentioned, in which a general rigidity of the muscles occurred, recovered. I ought, perhaps, to state that there was no permanent rigidity, but it came on when the body was to be moved. It continued to recur for thirty-six or forty-eight hours."

Thus far, our analysis of Dr. Sutton's work has been confined exclusively to the personal observations of the author. We come next to his view in reference to the character of the particular form of disease described by him, and of the nature of typhoid fever in general.

In regard to the supposed specific character of typhoid fever, and its entire distinction from typhus fever, our author calls in question the validity of the evidence upon which these opinions are based.

"If this subject could be settled," he remarks, "by the authority of a very considerable number of highly eminent men, it might be now considered as put to rest. But whilst expressing my unfeigned and very high respect for, and confidence in, these gentlemen, I am not yet prepared to consider the matter as placed beyond controversy. They prove, conclusively, that, according to their observations, a certain train of symptoms has almost always (always, if you please) been followed by ulceration of Peyer's plates; that after another train of symptoms, those plates have never been found ulcerated. Hence, they conclude that these two trains of symptoms denote two diseases specifically different. They may be right, but are they necessarily so? According to my observation, and that of physicians immediately in this vicinity, the rose spot does not appear as a symptom of typhoid fever. Am I to set this against the observation of the profession, and conclude that this eruption is not characteristic of the fever? Assuredly not. But the symptoms of typhoid and typhus fever do not differ more than those which attend different epidemics of bilious fever. For example, we may have, in one summer, an eruption of red pimples or blotches, great nausea and vomiting, and bilious diarrhœa to attend it. Perhaps the next summer, it will be without either, and obstinate costiveness be present. Yet we hold the two years to have produced the same disease, very much modified, it is true, in appearances. Again, is there more difference between the symptoms of typhus and typhoid fever than between those of the ordinary intermittent, and aggravated forms of bilious fever, of the remittent and congestive types? Yet we consider them essentially the same disease.

"Dr. Power informs us that the vessel Rio Grande brought (to Baltimore) seventy cases of *typhus*, and that four of the seamen and several steerage passengers had *typhoid* fever. Professor Drake found, among the emigrants at Gross Island, patients with typhus and typhoid fever, *i. e.*, those with rose spots and those with petechiæ. These are rather equivocal evidences of the non-identity of the two diseases, yet certainly not proving their identity. But we find others as well situated to observe, and as well qualified to judge, view the matter in a light very different."

Dr. S. quotes the account given by M. Landouzy (*Archives Générales*, Jan. et Feb. 1842) of an epidemic fever which prevailed at Rheims in 1839–40, which, if it were possible to identify a disease by symptoms, was unquestionably one of *typhus fever;* but, in the examinations made in six fatal cases of this epidemic, "the intestinal lesions characteristic of typhoid fever were present." In reference to this fact, Dr. Bartlett queries whether, under certain circumstances, the cause of both typhus and typhoid fever may not be so commingled as to give rise to a mixed disease, in which there is a combination of the elements of both. Professor Wood also suggests the occurrence of this occasional amalgamation of the two diseases.

"Gerhard acknowledges to have met with six cases of true typhus in which the intestinal lesion resembled dothinenterite, and admits that the follicular ulceration occurs in the British epidemic, which he regards as true typhus ('*Dickson's Practice*,' 412)."

"With regard to the amalgamation of specific diseases," Dr. S. observes, "thus suggested by Profs. Wood and Bartlett, it would certainly ill become me to deny the possibility; but, inasmuch as the explanation seems to me to be gratuitous, and, so far as I know, unsupported by analogy, but rather contradicted by it, I think it ought to be entertained with caution and hesitation. Under such admissions by Bartlett, Wood, and Gerhard, I do not know that it would be too much to say, in the words of *Gaultier de Claubry*, that there are no means of distinguishing typhus from typhoid fever, in relation either to lesions or the symptoms of the two diseases. Again, 'the identity of the two diseases is henceforth put beyond a doubt.'—*Bartlett*, 302."

Dr. S. urges the fact that the rose-coloured spots are absent in many cases of the so-called typhoid fever—in five out of fifty-four cases observed by Louis; in one-tenth of the cases, according to Bartlett; in about one-fourth of the seventy cases referred to by Chomel and Genest; and in all of the cases which fell under the notice of himself. Is, then, he asks, this eruption to be considered an essential symptom?

"Is it true that any eruptive fever ever prevailed in which one-fourth or even one-tenth of all those affected failed to exhibit the eruption? Or is there any instance in which an eruptive fever prevailed for six years in any one location, without the eruption being observed, though diligently sought for?"

The space of time during which this eruption makes its first appearance, Dr. S. thinks rather too long for a specific eruption—that is, if we are to reason on this disease from analogy. Its appearance is said to occur from the sixth to the twenty-fourth or thirty-fifth day. I do not, Dr. S. remarks, know of any exanthem in which so much latitude in the period of eruption is allowed, there being nothing to interfere with its regular development.

Dr. S. insists that, as the eruptions, rose spots, and petechiæ are considered as of much importance in distinguishing typhoid from typhus fever, they ought themselves to be distinguishable; and yet three out of six cases investigated by Dr. Shattuck exhibited both eruptions. According to Dr. Stewart (*Bartlett*, 294) in the more severe cases of typhoid fever, the eruption "may exhibit, during the period of increase, four different states, being florid, dark, livid, and petechial. When the hue of the eruption is florid, it disappears readily under the finger; when dark, it still disappears, but more slowly; when livid, semi-petechial or pseudo-petechial, as it has been called, it is only partially effaced; and when petechial, it is not at all affected by pressure. In many cases, it remains florid throughout; in others, it presents one or more, and in not a few, all these alterations."

This change, from rose spot to petechia, was also observed by Prof. Drake, at Gross Island, and by Dr. Upham, at Deer Island Hospital.

"Respecting this eruption," says Dr. S. "there is another point not altogether unworthy of consideration. Prof. Bartlett refers, p. 108, to several cases in which this rose-coloured eruption appeared during a relapse after an attack of this fever; and a similar case is noticed in this essay. This, it seems to me, is proving too much. I do not know that the eruption peculiar to small-pox, measles, or any other exanthem has been observed to reappear after having disappeared in the regular course of the disease. If my notion on this point is correct, reasoning from analogy, we should not expect the eruption of typhoid fever to reappear, considering it an eruptive disease. If, then, the eruption in the second instance is accidental, not proper to the disease, the same eruption appearing in the first instance, may be accidental, not essential to the disease, but dependent on intestinal irritation." Again, he remarks, "Is it unfair to doubt the distinction between the rose spot and petechia? If the same identical spot is a rose spot one day, a petechial the second, and a rose spot again on the third, it does seem to me that distinguishing them apart is alike impossible and useless. Hence we must not be surprised, nay, we may expect, that the rose spot and petechia shall eventually turn out to be the same eruption under different modifications."

It is the peculiar intestinal affection, the inflammation and ulceration of Peyer's patches, which Dr. S. thinks those who place typhoid fever among the exanthems ought to consider the characteristic eruption. It is held, he remarks, to be characteristic of the disease—essential to it—that it is found in no other acute disease, if in any at all. Our author adduces facts which, in his opinion, render the doctrine that the presence of the intestinal disease referred to is the characteristic mark of a specific fever, extremely doubtful. The first class of facts are founded upon the statements of Lombard of Geneva, Shattuck of Boston, Fouquier, and Prosper Dor, that they have observed cases which, during the lifetime of the patient, presented the characteristic symptoms of typhoid fever, but in which, after death, no disease of the elliptical plates of Peyer was discoverable. The second class of facts are founded upon a series of observations, showing that the intestinal disease, supposed to be peculiar to and characteristic of typhoid fever, is met with in various other and very dissimilar affections. Thus, Broussais found it in a case of intermittent fever, changed into continued fever.

It may be objected, Dr. S. observes, that in this and some other examples cited in his essay, the ulcerations are not those peculiar to typhoid fever. Bartlett states, after Chomel, "that one of the most constant and uniform characteristics of secondary lesions, consisting generally of specific inflammations, is the fact of their being *disseminated;* of their occupying numerous and circumscribed spots in the tissues and organs of the system." "Now, in every respect, the intestinal lesion of typhoid fever corresponds to this class of pathological alterations. It is disseminated, occupying the same glandular tissue at different points of the intestinal mucous surface." It is true he does not assert that the ulcerations are confined to the glandular structure and the mucous membrane covering it; but such is clearly the impression conveyed by the language.

"That such is not always the fact, I have evidence," says Dr. S., "to me conclusive. In Sylla, the autopsy of whom is given in this essay, many of Peyer's patches, and of the solitary glands, were ulcerated, and, for aught I know, the ulcerations may have been confined to the bounds of the glands; but at the lower end of the ileum there were several very irregular ulcerations, one of which was two inches long by one and three-quarters wide; a tongue of membrane not ulcerated, running up the broad end of the ulcer about half an inch wide and three-quarters long. In the cœcum and colon were similar irregular ulcerations. I hold that these ulcerations were not situated in Peyer's plates at all, because the form and proportions were not such as to admit that interpretation. Or, if they were so situated, the contiguous membrane must have been involved. I had the pleasure of showing the casts of some of these ulcerated portions of intestine to Prof. Bartlett, who recognized them as examples of the lesions of typhoid fever."

Dr. S. adduces from Horner (*Path. Anat.* 307) an example of ulceration of the jejunum and ileum in a patient dead of pulmonary phthisis; also the statement made in Wistar's Anatomy by Pancoast, that the intestinal glands are frequently the seat of lesion in phthisis as well as in typhoid fever—no attempt to discriminate between them being made; and a case of phthisis which fell under his own notice, in which thickening, increased coloration of the patches of Peyer, and of the solitary glands of the ileum, were detected after death. Dr. S. also refers to the fact that Mackintosh detected ulceration of the ileum and colon in fatal cases of infantile remittent fever—that the same ulceration is common after death from small-pox—that it is met with in those who die of painter's colic—in children who die during dentition, and a number of cases, including one of dysentery, recorded by Abercrombie in his work on the stomach. Of these last, Dr. S. remarks :—

"Here, we have a lot of cases, some of which, by symptoms and appearances on dissection, were pretty certainly cases of what would now be called typhoid fever; some in which the symptoms would seem to indicate that to have been the disease, but the dissections did not show the peculiar lesions of typhoid fever, but either a corresponding lesion situated in the colon or an analogous one situated in the ileum. The last is considered dysentery by the author, but it seems doubtful if it was not truly one of typhoid fever. At any rate, the appearances on dissection were analogous to those having a striking resemblance to typhoid fever."

"But it may be urged against many of the cases adduced that they are not described with sufficient minuteness to enable us to form a proper opinion as to their value. That English writers do not discriminate between typhus and typhoid fevers. That many cases which have been described as infantile remittent fever; and even cholera infantum, were in truth typhoid fever. In one word, that things identical have been considered as altogether dissimilar. To prevent, on the one hand, confounding things which are really different, and, on the other, separating those which are alike, is many times a work of great difficulty. Such is the matter now in controversy.

"Let us recapitulate this section somewhat. I have declared that the typhoid eruption, the rose spots, though diligently sought for, had not been found in this vicinity. I have exhibited proof that, in some considerable proportion of cases, say from one-tenth to one-fourth, it is admitted to be absent. That in some cases, whether of typhoid or typhus fever it matters not, both these and petechiæ appear upon the same patient. That in some cases they are convertible into each other, running from rose spots to petechiæ, and *vice versâ*. That the lesions of the elliptical plates have not been found where, from the symptoms, we have a right to expect them. That these lesions have nevertheless been found where we had no right to expect them. That in other cases we have found analogous lesions in the ileum, and corresponding lesions situated in the colon.

"It may be argued that the case quoted from Broussais was one of genuine typhoid fever, occurring after one of intermittent fever; or that it was typhoid fever from the beginning. The history of the case, as given, does not seem to warrant that conclusion. Still the author may have had his attention so fixed upon some features of the case, as to prevent his seeing others important to the proper understanding of it.

"In the cases from Horner, there is evidently no suspicion entertained by the author, that anything of what is usually called fever affected the patients. Matthew's case, given before, I considered one of pure consumption, and there was nothing to change my opinion; and I have the satisfaction of having a confirmation of this opinion in the judgment of Dr. Bartlett. Perhaps it would not be uncharitable to suppose that some of the cases reported as infantile remittent, or even as cholera infantum, were in truth those of typhoid fever, as I cannot conceive that it would be difficult to confound them; but I should suppose that painter's colic ought not to be so confounded.

"Upon a careful examination of the whole ground, shall we conclude that the lesions of Peyer's plates are invariable and characteristic of typhoid fever—that they are to be found in no other disease? Truly, I cannot bring myself to do so. Shall we conclude that they do not indicate a distinct form of disease, or even a distinct disease? I am not prepared for that either. Shall we say that they are an accidental symptom which may occur in many different diseases, and even exist independent of other symptoms? It behooves us to be cautious in this matter. In our profession, we have had a sufficiency of hasty conclusions, drawn from insufficient observations, which have been replaced by other conclusions drawn from facts equally unsatisfactory. I hope we shall leave this matter under investigation, until we shall have accumulated facts sufficient to enable us to come to conclusions which shall remain permanent."

Such, in brief outline, are the objections advanced by Dr. S. to the validity of the views entertained by many of the leading physicians of Europe and America as to the distinct and specific character of typhoid fever. They are presented with the utmost candour, and evidently in good faith, from a strong conviction of their weight, if not their conclusive character. Some of them are deserving of a serious consideration, while others appear to us rather specious than real.

Of the actual existence of typhoid fever, as described by Louis, Chomel, and others, connected with, and perhaps dependent upon follicular inflammation of the intestines, there can be no possible doubt; the difference which exists between its pathological nature and characters, and those of ordinary typhus, is, in our opinion, still an open question. If typhus fever depends essentially upon a certain morbid condition of the blood, as is probably the case, then we can readily understand how typhus and typhoid fevers may co-exist in the same individual with a combination of the characteristic symptoms of both.

We have never seen a well-marked case of typhoid fever that has proved fatal, in which, when an examination after death has been made, the peculiar intestinal lesions were absent, though we have, in a few instances, detected them in cases of well-marked typhus fever, occurring in immigrants, landed with the disease upon them from on board of infected vessels, as well as in cases among the same class of persons, in which, during life, the distinctive symptoms of typhoid and typhus fevers were so completely blended as to render it doubtful to which of these forms of disease they properly belonged.

The same condition of the patches of Peyer, and of the solitary glands so generally observed in fatal cases of typhoid fever, is unquestionably observed in patients who have died of other diseases. It is almost invariably met with in children who have died of what has been termed infantile intermittent fever; but this affection, from a careful analysis of its symptoms from its onset to its close—taken in connection with the lesions discovered after death—I am well convinced, is the same disease as the typhoid fever of the adult, modified, and that very slightly, by the age of the patients. The same lesions are invariably present also in infants, who have perished from genuine cholera infantum; and even here, the disease bears, in many of its features, so close a resemblance to typhoid fever as to lead to a suspicion that it is closely allied, if not identical, with it. Acute or chronic inflammation of the Peyerian patches terminating in ulceration, is, however, one of the most common lesions discovered in infants that die during the period of suckling, and in cases where, during life, there could be no suspicion of the presence of typhoid fever. In the adult, also, if we are to depend upon the apparently candid and careful statements made by observers of respectability, the same lesions have been discovered after diseases having nothing in common with typhoid or typhus fever.

Our own observations have convinced us that the typhoid is a distinct disease from typhus fever. This conviction has resulted from a consideration as well of the well-marked distinctive symptoms by which it is attended throughout its progress, whether towards convalescence or a fatal termination, and the lesions discovered after death, as of the peculiar circumstances under which the disease ordinarily occurs, so very different from those productive of genuine typhus fever. Our diagnosis has been made up from the whole of the symptoms present in each case, without reference to the occasional absence of a single symptom, or to the occasional presence of those not usually met with in the disease.

While such, however, are our convictions, we feel no disposition to turn a deaf ear to whatever objections to them may be candidly presented. Our aim is truth, and in pathology, truth can only be attained by the accumulation of careful observations, and the utmost freedom of discussion in reference to the accuracy of these observations, and the validity of the deductions drawn from them. We ask, therefore, for the work of Dr. Sutton a careful perusal; let the views advanced by him be cautiously weighed, and adopted or rejected as they shall be found valid or invalid. D. F. C.

ART. XVII.—*Illustrations of Syphilitic Disease.* By PHILIP RICORD, D. M. P., Surgeon to the Venereal Hospital (Hôpital du midi), Paris, &c. &c. Translated from the French by THOMAS F. BETTON, M. D., M. A. N. S., Fellow of the College of Physicians of Philadelphia, &c. *With the addition of a History of Syphilis, and a complete Bibliography and Formulary of Remedies, collated and arranged* by PAUL B. GODDARD, M. D.; with fifty large quarto plates, comprising 117 beautifully coloured Illustrations. Philadelphia, A. Hart, late Carey and Hart, 1851.

GOOD clinical reports are much more available and instructive to a practicing surgeon than formal treatises, just as the study of the classic marbles of ancient and modern art is more beneficial to the sculptor than libraries of critiques on the correct and beautiful; and the more faithful the transcript of nature in either case, the more valuable is it to the student. In this view, we cannot but place a very high estimation upon the "*Clinique Iconographique de l'Hôpital des Vénériens*," of which the volume before us is a translation. In it, M. Ricord has recorded the experience of his hospital; and when the author's acuteness and accuracy of observation are considered, together with the vast field which is afforded for their display in the wards of that institution, the value of the book must be admitted. It contains, moreover, drawings from nature, executed by the best artists, which are as faithful representations of the cases presented to the inspection of his clinical pupils as could be provided, and indeed every one will confess, we are sure, the beauty and fidelity of the illustrations.

The views of M. Ricord are so well known, that we design, in this notice, simply to inform our readers as to the arrangement and the merits of this particular edition of his book.

The *primary symptom of syphilis—the chancre*—is first illustrated by reports of cases and by drawings. It is exhibited in a variety of situations, on the penis, in the urethra and bladder, on the neck of the uterus, in the vagina, at the anus, on the breast, on the groin. Its varying characters, too, are commented upon, and the conditions of these modifications relating to peculiarity of the tissue affected, to the general condition of the system, or the vascular state of the seat of the ulcer. These varieties are the healthy, the indurated, the phagedænic, the diphtheritic, &c. Many experiments are detailed to show the effect of inoculation with the matter secreted by a chancre, and which establish the fact that *such matter*, whether taken from a chancre on the external genitals, the urethra, the neck of the uterus, the bladder, the anus, the breast, or the mouth, or from a chancrous bubo, or from any other source, will, if properly inoculated, always produce a *chancre*, and that this result will not follow inoculation with simple pus or muco-purulent matter, such as is formed in *blennorrhagia*. The leading points of this interesting and exceedingly important matter are expressed in a brief review by M. Ricord of the report presented to the Academy with reference to this subject (pp. 144—154)—a report founded upon some cases which were submitted to the Academy by M. Ricord. We need scarcely add that our certain information upon this subject is due to the investigations of M. Ricord himself.

The volume contains several beautiful representations of vegetations sprouting from the urethra, from the surface of the glans, from the labia of the female, and from the anus. In some instances, these appeared to have arisen independently of any local specific cause; sometimes to have resulted from the irritation of a venereal agent.

The *constitutional* contamination from syphilis is illustrated under the divisions of *secondary* and *tertiary symptoms*. This distinction is based upon the phenomena attending the progress of the disease—certain tissues, as the skin and the mucous membranes, being invaded before certain others, as the fibrous tissues and the bones.

The *secondary symptoms* are presented to us in the form of mucous papula of the vagina, anus, and mouth; of the varieties of cutaneous eruptions, of iritis, &c. And the *tertiary symptoms* are described as "gummy tumours," (circumscribed indurations of the areolar tissue, which sometimes disappear under treatment, but more frequently, perhaps, suppurate;) sarcocele, ulcerations about the fauces, inflammation of the periosteum and of the bones, caco-plastic degeneration of, or deposits in, the muscular and osseous structures, caries and necrosis.

We have also read with great interest the details of several cases descriptive of the history of this horrid disease from the formation of the primary ulcer to the death of the patient, and including the result of the *post-mortem* examinations. In this world, at any rate, lust is oftentimes its own avenger.

> "Magne pater divum! sævos punire tyrannos,
> Haud aliâ ratione velis, quum dira libido
> Moverit ingenium, ferventi tincta veneno."

Throughout the volume, we observe that the author digresses from time to time, from the report of a particular case, to generalize and to advance propositions with regard to groups of similar cases, both with reference to the pathology and the treatment of the disease. Thus the book combines, in some measure, the advantage of a clinical report and of a formal general treatise.

Of the merits of this first English translation of the volume, as now presented to us, we can speak in terms of commendation. The typographical portion of the task undertaken by the publisher is excellently well accomplished; the plates have been copied, particularly as regards the drawing, in a manner which is well calculated to make us feel gratified and hopeful as to the progress of the art in our country; in the matter of *colouring*, however, they are much inferior to the original—a point to which our artists will do well to devote particular attention.

The editor has not strictly observed the order of succession of the subjects treated of, as it occurs in the original; and we think that his arrangement is a better one, inasmuch as he has brought together the allied cases of the disease, instead of interspersing these promiscuously with others which they resemble only in having had a similar origin, and scattering all confusedly through the book. And he has, moreover, done a kindness to those who may refer to the volume for the practical information with which it is replete, by collating the many medicinal formula which M. Ricord has recommended, and grouping them all together.

Few persons, even of those who read French with much facility for their own amusement or instruction, are aware of the difficulty of making a correct, and, at the same time, an elegant translation for the perusal of others. But Dr. Betton has accomplished this task very happily. We have looked over his rendering of the original with considerable care, and only one passage has struck our eye as being decidedly faulty: this occurs at page 119, as follows: "Had I remained satisfied with these data, I might have believed in this case, as some do, in primary constitutional syphilis, or, with those who do not regard forms with regard to the limits of the infection, in a tardy hereditary affection." Even in this sentence, the author's meaning is appreciable, although we think it might have been transferred into more elegant English.

Dr. Betton has also made valuable additions to the work. He has prefixed to the translation a full *bibliography*, commencing with the year 1495, for which he certainly deserves the acknowledgments of all students in this particular department of surgery; and he has likewise drawn up an exceedingly interesting "History of Syphilis," from the earliest times. In this essay, the author displays the evidence of extensive reading, and great familiarity with the subject of which he writes, and he conveys to his reader the results of his investigations in a most pleasing manner. He cites abundant authority to show that syphilis was known and feared long before the date of its very commonly supposed origin—A. D. 1493–94. Indeed, if there were no direct mention of this disease by earlier writers, strong probability of its existence would be derived from the horrible degree and extent of licentiousness with which the earth has been cursed from time almost immemorial. It was surely not the immediate intention of this essay to "point a moral," yet we do not remember ever to have read a book which so strongly convinced us of the *innate bestiality* of human nature. All other vices and enormities might well be dispensed with, and lust alone, with the crimes and miseries which it engenders, would be adequate to convert any paradise into a hell. If Christianity — not the Christianity of name and profession alone—had conferred no other boon upon mankind than the introduction and inculcation of purity of social life, how vast the benefit, how immeasurable the blessing! and how necessary the operation of such an influence!

> "The soul grows clotted by contagion,
> Imbodies and imbrutes, till she quite lose
> The divine property of her first being."

There is one opinion advanced, or, at least, acquiesced in, in this preparatory essay, with which we cannot coincide, viz.: that prostitution, as an institution or a custom, must be submitted to, and winked at, if not actually established, under certain police regulations, "as a safeguard to the virtue of honest women." We cannot admit such a necessity; as well contend that street beggars should be permitted and encouraged in their vagrancy, as a safeguard to the public and private purse. But the fact is that the greater the countenance which is extended to this class of parasites, the more they multiply, and the more common become burglaries and highway-robberies, thefts, and petty larcenies; because idleness, and its inevitable accompaniment and consequence, vice, are fostered; and after a time, even the street-walker, now so humble in his petition and demeanor, will, perhaps, exhibit himself in the more menacing attitude in which the "*poor lame soldier*" revealed himself to Gil Blas on his memorable journey to Penaflor. Every penny given to a common beggar only tends to confirm him in his poverty and dependency; official protection makes the matter worse, so that the self-respect which has long recoiled from asking the first alms at length bows its head in presence of the trappings which the State hangs upon the breast of mendicancy. And so will it be with every species of vice.

We believe that, in every community in which just laws are duly enforced, "the virtue of an honest woman" will be her best and her sufficient protection, (excepting, perhaps, against those whom insanity has deprived of a proper self-control, and for the safe confinement of such the State is certainly answerable):

> "A thousand liveried angels lackey her,"

to quote the beautiful and eloquent sentiment of the elder brother in the "Comus."

We believe that the lascivious desire is excited and perpetuated, in constantly increasing strength, by the physical indulgence, and by the fostering of impure emotions; and that, so long as the gratification is attained or attainable, the disposition remaining the same, so long will sensuality in thought and acts live and flourish. But we do believe that the desire may be overcome, and that, excepting in the instances of disease just alluded to, and for which confinement should be enforced, it will be overcome by a continued exercise of *rationality* on the part of the individual, i. e. *the human being* must steadily and nobly combat the disposition which inclines him or her to become *a brute*. The conflict may be long and arduous; the low desire and the proneness to yield to its promptings may for a time linger around their wonted home, like the spectre-lights which haunt old graveyards; but these will disappear as the moral atmosphere becomes freshened and purified.

Some, though but a few, of the plates, and the pages of letter-press accompanying them in the original work, have been omitted from this edition of M. Ricord's work; we regret this, both because of their intrinsic value, and because we think it is due to its distinguished author that the volume should be reproduced here in as nearly as possible the same degree of completeness with which he gave it to the world.

As it is, however, the present edition of so valuable a work is an important addition to our standard surgical library, and it will, we doubt not, be so regarded by the profession. It is published, too, at a price which makes it very much more accessible to all than the original can be. F. W. S.

Art. XVIII.—*On Anæsthesia and Anæsthetic Substances generally; being an Experimental Inquiry into their Nature, Properties, and Action; their Comparative Value and Danger; and the best Means of counteracting the Effect of an Over-dose.* By Thomas Nunnely, Esq., F. R. C. S. E., &c. &c.

This highly interesting and able communication is published in the sixteenth volume of the Transactions of the Provincial Medical and Surgical Association; of the second part of which volume it occupies two hundred and fifteen pages. It is the only extended experimental inquiry into the nature, properties, and action of the various anæsthetic agents, their comparative value and danger, and the most reliable antidotes or remedial means to be resorted to when an overdose has been taken, with which we are acquainted.

Convinced of the vast importance of the question in reference to the practical application of these agents, and of the impossibility, from the deficiency and vagueness of the information in possession of the profession, of arriving at any accurate and certain conclusion as to their true value, and the circumstances in and under which they, or any of them, should be employed or not, Mr. Nunnely undertook a series of experiments to assist in affording that information, and to furnish evidence from which such inferences and deductions may be fairly drawn as shall, if possible, render their practical application as safe and certain as the nature of the case admits.

"For this purpose," Mr. N. remarks, "we require facts to guide us. The inquiry is therefore strictly experimental, and has been undertaken for the purpose of ascertaining:—

"1. If the property of inducing anæsthesia be confined to the few substances which have hitherto been used, or if there be not a large class of bodies which have in common the property of temporarily suspending consciousness or sensibility, or both, vitality remaining; and if this be so, whether these substances are characterized by any similar composition, or chemical alliance, and have a common *modus operandi* upon animal bodies?

"2. What their *modus operandi* is? or, in other words, upon what structures do they act? what changes do they produce? what are their physiological effects? is their primary effect local or general?

"3. Is there any one of these substances which should be selected in preference to, or to the exclusion of, all the others? Is there any one the temporary effects of which are more complete and certain, the permanent more harmless, and its administration more under our control than those of any of the others, that we should uniformly retain the employment of it, and reject the use of them?

"4. Is there any essential difference in the action of these substances according to the mode in which they are administered? Do they produce the same effects in whatever way they are carried into the body, or does the effect depend upon the nature of the tissue upon which they are applied? and does the same dose, when applied to the same tissue, and in the same manner, invariably produce the same uniform results?

"5. Are there any symptoms by which we may accurately judge of their effects, and ascertain and control the point to which the system may with safety be brought under their influence?

"6. In case of an overdose, are there any means which can be employed to counteract the effects? Do we possess any antidotes, or are there any remedies? If so, what are they, in what manner do they act, and how should they be employed?"

Although Mr. N. admits that the answers he has given to these six propositions, which embrace a very wide field of inquiry, or perhaps to any one of them, may not be complete and satisfactory, still the series of experiments upon which these answers are based are in the highest degree satisfactory. If they do not settle conclusively all that it would be desirable to know in relation to the qualities and action of each anæsthetic agent, its relative value either absolutely, or under particular circumstances, having reference to the age, temperament, condition of health of the individual, and the nature of the cases in which the production of anæsthesia is desirable; they nevertheless throw much light upon each of these circumstances, while they are calculated to render the employment of this or that anæsthetic agent less a mere matter of empiricism than it has been hitherto.

The substances experimented upon by Mr. N. and of which the effects are detailed in the communication before us, are, chloroform, alcohol, spiritus vini of the Pharmacopœia, sulphuric ether, spiritus etheris nitrici, Ph. L., nitric ether, acetic ether, chloric ether, chloroform and spirit of wine mixed, hydrochloric ether, hydriodic ether, hydrobromic ether, Dutch oil or chloride of olefiant gas, oleum æthereum, Ph. L., heavy oil of wine, aldehyde, two or more of these mixed together, iodoform, olefiant gas, light carburetted hydrogen, coal gas, benzole, camphor, naphtha (three varieties), oil of turpentine, creasote, protoxide of nitrogen, hydrocyanic acid, coneine, hydrogen, carbonic acid, carbonic oxide, bisulphuret of carbon, sulphuretted hydrogen, bromoform.

The mode of administration was by—1. Inhalation, in various degrees of concentration, for a limited period. 2. Inhalation for a prolonged period. 3. Internal administration by the stomach and rectum. 4. Injection into the veins. 5. Limited application to the skin—local action. 6. A trial of various remedies and presumed antidotes.

The *post-mortem* appearances are given in each experiment when death was occasioned.

The animals submitted to experiment were chiefly taken from the four classes of the vertebrata; some also of the invertebrata were used, though dogs and cats were principally employed; yet Mr. N. thinks that the variety has been sufficient to show that, without exposing himself to the charge of unwarrantably generalizing, he may affirm the effect throughout the animal kingdom to be uniformly of the same kind, and therefore that he is fully justified in considering it would (as indeed with many of the agents we know is the case) be the same in man; and consequently, in applying the practical inferences to the human subject, we are not very liable to go wrong.

Mr. Nunnely details, first, the whole of the experiments, 363 in number, undertaken to solve the questions proposed in the six propositions already stated; next follow such remarks as the effects of each substance individually appear to call for; after which are presented the general inferences and conclusions which he supposes to be fairly and legitimately deduced from the experiments, in the form of answers to the queries propounded in the outset.

Interesting as are the results of all the experiments performed by Mr. N., and valuable as are the remarks made by him in reference to the anæsthetic effects and comparative value of each of the articles experimented on by him, we must pass them by and confine our present notice to the general conclusions drawn by the experimenter, and offered in reply to his leading queries. It is of course evident that the details of the experiments admit of no analysis; as their value to those who would desire to test by these the accuracy of Mr. N.'s deductions depends upon the minuteness with which all the details are given; and, in reference to his remarks upon the individual articles to which each series of experiments refers, we should scarcely be doing justice to Mr. N. or to our readers by attempting to give a digest or abridgment of them.

In reply to the first query, Mr. N. remarks:—

"The experiments related in the foregoing pages prove, most unequivocally, that the power of temporarily suspending consciousness and sensation, more or less completely, is not confined to the few substances which have hitherto almost exclusively been used for the purpose, but that many other substances possess the property in common with sulphuric ether and chloroform. Many in a less degree, some in an equal, a few in a greater, and, probably, there may be other substances in the various compounds of the ether and allied groups, which chemistry is almost daily adding to the list, that may be discovered to possess the power in a still greater degree."

"If those bodies are excluded from our consideration which do not appear, though they may induce insensibility, to produce that condition of the system which is understood by the term anæsthesia, as the protoxide of nitrogen, and sulphuretted hydrogen, the other substances experimented upon may be arranged into three classes, according to the number of elements which enter into their composition:—

"1. The quaternary, into which, besides carbon, hydrogen, and oxygen, one other element enters, as nitric ether; these are very few in number, and not remarkable for anæsthetic power.

"2. The ternary compounds, which are far more numerous and powerful. They all agree in having carbon and hydrogen entering into their composition, while the third element is very varied. In the oleum æthereum, in aldehyde, in sulphuric and acetic ethers, it is oxygen; in chloric and hydrochloric ethers, in chloroform and chloride of olefiant gas, it is chlorine; in hydriodic ether (iodide of ethyle), it is iodine; in hydrobromic ether (bromide of ethyle), bromoform, and in bromide of olefiant gas, it is bromine; while in hydrocyanic acid, the third element is nitrogen. Moreover, of this third element, even when the same, the relative proportions may vary considerably, the anæsthetic power of the substance remaining very great; for instance, in the atom of chloroform there are three of chlorine, whereas, in the atom of chloride of olefiant gas, there are only two atoms, while the proportions of carbon and hydrogen are much greater in the latter substance than in chloroform.

"It is worthy of remark, that in all these bodies, with one exception, the carbon and hydrogen may be considered as forming a radical base, which unites with the oxygen, chlorine, iodine, and bromine, to constitute a neutral body, or, as we shall presently mention, to act as a base for another combination. In hydrocyanic acid, the base would appear to be formed of carbon and nitrogen, the hydrogen in this playing the part of an acidifier; the resulting compound being the feeblest and most unstable of all acids. This slight acidity can, however, be scarcely considered as a distinguishing character; for we find that conia and other similar vegetable proximate principles, where the same three elements constitute the substance, have a feeble alkaline action, the different character of these bodies depending, probably, rather upon the amount of nitrogen than of hydrogen.

"3. In the third group the substances are all bi-elementary; they are, with three exceptions, hydrocarbons; the exceptions being carbonic oxide, bisulphuret of carbon, and chloride of carbon. The most simple, obvious, and striking physical properties which the whole of these substances possess in combination is that of being gaseous, or of being so volatile that at the ordinary temperature they are readily converted into vapour.

"Although in the first group, that of quaternary compounds, the number of substances is limited, there are several of those which, on ultimate analysis, are found to consist of only three elements, which most probably, in mode of combination, have a strong analogy, if not identity with this group. For instance, acetic ether, although only containing hydrogen, carbon, and oxygen, has probably these elements arranged, in the first instance, so as to constitute oxide of ethyle and acetic acid, which as such, then enter into combination with each other to form acetic ether, as the nitric acid and oxide of ethyle do; this also may, perhaps, be the case with hydrochloric ether."

"If we analyze the composition, and compare the effects of each of the substances in the second group, we find that we may in succession exclude the third element of which each consists, and yet have an effective anæsthetic; thus, in sulphuric ether, we have oxygen, but no chlorine or nitrogen; in chloroform, chloride of carbon and chloride of olefiant gas, no oxygen or nitrogen, but chlorine instead; in hydriodic ether, iodine; in bromoform and bromide of olefiant gas, bromine is substituted; while in hydrocyanic acid, we have neither oxygen nor chlorine, but nitrogen. So that by this process alone, we should come to the conclusion that, however advantageous one or other of these third substances may be in modifying the action of the other two elements, the hydrogen and carbon of which the agent consists, they cannot be regarded as at all essential to the constitution of an anæsthetic body. This conclusion is rendered perfectly certain, when the constitution and action of the third group of substances are considered. Here most of the substances only consist of hydrogen and carbon, and yet among them are found agents which are possessed of considerable anæsthetic power, as, for instance, benzole, common coal gas, and olefiant gas."

"Hydrogen, if given alone, does not possess any anæsthetic property whatever, and if given in combination with any other body than carbon, it certainly does not act as an anæsthetic. With oxygen it is perfectly inactive; with most other elements it becomes a deadly poison. On the other hand, if other combinations of carbon are employed, as the bisulphuret of carbon, carbonic oxide, and chloride of carbon, it is found that these substances do act as anæsthetics; some of them not so safely, pleasantly, or so manageably, it is true, being altered and modified by the other substance with which the carbon is combined; but, nevertheless, still acting as anæsthetics. Hence, I think, we may legitimately arrive at the conclusion that to constitute an anæsthetic agent, carbon must be present, and that by the combination of it with hydrogen, or perhaps chlorine, we have the basis of the most effective anæsthetic agents. Whether the hydrogen itself plays any important part or not, it is difficult to say with certainty; probably it does, for though, *per se*, it appears to be absolutely negative, yet, as in combination with sulphur it materially modifies the action of this, so we may also suppose it to modify the action of carbon when in combination with it, and thus that it plays an important part."

The general recapitulation of Mr. N. is as follows:—

"1. That no anæsthetic agent has yet been discovered which does not contain carbon.

"2. That the combination of carbon with hydrogen or chlorine constitutes the best binary agent, and that the greater the proportion of the carbon to the hydrogen, being at least equal to it, the more powerful the agent is; and if we could obtain a pure liquid of hydrocarbon, containing these equal proportions, easy to be volatilized, and of constant composition, it is highly probable that it would constitute a valuable and safe anæsthetic; for, if the carbon be too much in excess, as in benzole, where the proportions are as two of carbon to one of hydrogen, although the compound is a powerful and safe anæsthetic, yet it is neither so manageable nor pleasant as where the proportion of carbon is not so great, symptoms being developed which may reasonably be supposed to arise from the excess of carbon.

"3. That hydrogen and carbon may unite as a radical base with oxygen, chlorine, iodine, bromine, nitrogen, and perhaps some other substances, to constitute anæsthetic agents; and that these compounds, or at least some of them, may again unite with acids, consisting perhaps of the same elements as the base itself, and yet retain, to a certain extent, the same property as the oxide of ethyle; as nitric, chloric, acetic, and hydrochloric ethers do.

"4. That of these ternary compounds, those act the best, all things taken into consideration, in which the third element bears the least proportion to the hydrocarbon, especially the carbon; as, for instance, ether and alcohol, perchloride of formyle (chloroform), and hydrochlorate of the chloride of acetyle (Dutch liquid), and of the binary compounds, those in which the atoms are in equal proportion to each other.

"5. That substances which are analogous in composition and isomorphous in form, as in physical and chemical character, so are they often similar in physiological action; but where they are not isomorphous, their action is not similar, as chloroform and iodoform.

"6. That substances which are isomeric, or nearly so, but very dissimilar in physical and chemical properties, are also so in physiological; as witness several of the pure hydrocarbons, which, though very similar in composition, are very different in properties.

"7. That, should any other combination of elements be discovered which shall possess more valuable and important anæsthetic power than those yet known, its composition will probably be found in accordance with the principles now announced.

"Lastly. We may conclude that the action upon the animal economy of all true anæsthetic agents, whether carbons or hydrocarbons, whether simple or compound, is essentially the same in character."

In reply to the second query, Mr. N. presents the following as the answers resulting from his experiments.

"1. That the action of anæsthetic agents is immediately and primarily upon the nerves. That the heart, respiration, circulation, the blood, and the muscles are secondarily affected.

"2. That in the first instance all these substances act as stimulants, this action being more or less prolonged, but to some extent perceptible in all. In the more powerful anæsthetics, as hydrocyanic acid, chloroform, and the chloride of olefiant gas, the stage of stimulation is short and comparatively feeble (unless with the two latter the dose be very small, when it is evident enough), the sedative effect being quickly superinduced. With most of the others, it is more prolonged; with ether it is considerable, with aldehyde it is still more so; with the bisulphuret of carbon, turpentine, and naphtha, even when inhaled, it is very great, and when applied locally, intense inflammation only is induced, anæsthesia scarcely being occasioned; while with alcohol, even when taken internally, unless the quantity be enormous, only the stimulant effect is produced at all.

"3. That the action is at first local. When these agents, in substance or in vapour, are applied to a limited portion of the body only, that portion is rendered anæsthetic; but that, if the application be more prolonged, or extended over a larger surface, then the effects become general. Thus we may paralyze a part or the whole of a single leg in the frog and toad; by continuing the application, the corresponding limb becomes involved, and a still farther continuation will affect the entire body of the creature, consciousness, sensation, and motion being all lost. In a large insect, or a reptile, we may stupefy the anterior or posterior half of the body with the attached limbs, the other part remaining unaffected. Even with the higher animals, the experiments demonstrate that, in the cat and rabbit, a part of a leg may be locally so affected as to be altogether insensible to the amputation of it, the general system not differing from its normal condition. In a man, a small portion of the surface or an entire finger may be made insensible, the feeling of numbness extending along the nervous trunks far beyond the part to which the application is made. Hence we may fairly conclude that the law universally holds good.

"4. That although the action of anæsthetic substances is upon the nerves, and principally upon those in connection with the cerebro-spinal axis, it is not primarily and directly upon the cerebral masses and sensorium, but upon the peripheral expansions of the nerves; that, *cæteris paribus*, the larger the number of these which can be directly and simultaneously acted upon, the greater will be the effect. Hence the *rationale* of the action of these substances when inhaled. When taken in substance into the stomach, they can only come in contact with a comparatively small number of terminal nervous papillæ, whereby is occasioned their stimulant, rather than their anæsthetic effect; but when inhaled, they come in contact with the whole expanded respiratory surface and the nerves there exposed. Of course, the more concentrated the vapour, the more intense and sudden will be the anæsthetic effects."

In answer to the third question, Mr. N. thus sums up his general conclusions from the experiments detailed.

"The substances which appear to possess the greatest power, and the effects of which are the least objectionable, are the oxide of ethyle (sulphuric ether), the gaseous carburetted hydrogen (of which common coal gas is perhaps the best), chloric ether, hydrobromic ether, chloroform, the chloride of olefiant gas, and the chloride of carbon.

"*Ether*, which, from being the first substance of this kind introduced was for some time almost exclusively used, has now almost ceased to be employed. In power, it certainly is much inferior to several of the other bodies; its action is not uniform and certain: more excitement is frequently manifested in its use; it produces much more irritation while being inhaled, and afterwards headache and feverishness are more liable to follow. These are objections so weighty, although in some degree counterbalanced by its general safety and the less liability to collapse supervening, that, unless under the circumstances pointed out in the remarks upon this fluid (that is, where there is reason to suspect any peculiar susceptibility to the action of the depressing influence of anæsthetics—such as disease of the heart of an asthenic character, or considerable constitutional debility), and other anæsthetics are not at hand, it will hereafter, I apprehend, be rarely used.

"*Common Coal Gas* is a safe and effective agent. Its cheapness is also an important recommendation. On the other hand, the disagreeableness of its odour as compared with the pleasantness of the chlorides, and its gaseous form, especially the latter, are serious impediments to its general employment. Under any circumstances, the inhalation of a gas is not of so easy and convenient accomplishment as that of the vapour of an easy evaporable fluid, more complicated apparatus being requisite. In places where the gas is not used for domestic purposes, the inconveniences of transporting and preserving it would be found to be objections not to be despised; but where other agents are not at hand, or from any circumstances are not thought to be altogether applicable, no hesitation need be felt in employing this substance.

"*Chloric Ether* is a pleasant substance both in taste and smell, and in a very young and feeble person, I should feel disposed to employ it in preference to chloroform; but in ordinary cases, all other things being equal, inasmuch as a larger quantity of it is necessary than of either of the following, I should not think its use would be urged.

"*Hydrobromic Ether* is a safe, pleasant, and effectual anæsthetic, but inasmuch as it does not possess any such qualities as to render its employment more advantageous than some other substances, the very great cost of it will, unless this can be materially reduced, entirely prevent its general use. One manufacturer would not prepare it for me under one guinea an ounce.

"*Chloroform* is undoubtedly one of the pleasantest and most powerful anæsthetic substances known; indeed, until I showed the safety of the chloride of olefiant gas, by far the most so. That it is the safest can by no means be maintained with equal certainty; on the contrary, in safety I believe it to be inferior to all the other substances mentioned just below." Some of the indications for and against its use are the opposite condition of things under which the sulphuric has been recommended. "There is one unpleasant effect which sometimes follows the administration of chloroform that I have not seen noticed, but of which I have found more than one person complain, namely, that for long (even months) after its inhalation, they have occasionally experienced the same sensations as they did at the moment of breathing it."

"*Chloride of Olefiant Gas.* This fluid I have now administered so frequently in practice, that I think I am justified in stating the inferences drawn from the experiments upon animals are correct. It appears to be unattended with the troublesome excitement produced by ether on the one hand, and on the other with less of the tendency to collapse, which is so objectionable in chloroform; hence, if that only true test, experience in general use, should confirm this opinion, it will form a not unimportant addition to the list of anæsthetic agents. In the report upon the action of Dutch liquid, which I made in the *Journal* of the Association, I was misled as to the relative cost of it and chloroform. I have recently had reason to think that, owing to a want of care, ignorance, or some other cause, an improper method of manufacturing the fluid was employed, and that it contained spirit of wine, hence the lower cost of its production. I would, however, here state, that it appears not improbable a combination of the chloride of olefiant gas with spirit, not a mere admixture of the two fluids, but a combination during manufacture, may probably prove, not only a sufficiently cheap, but a valuable anæsthetic."

Chloride of Carbon. Mr. N. is doubtful of the result of his experiments upon this substance, having reason to suppose that the substance employed by him was a chloride of a hydrocarbon, dissolved in spirit; should, however, experiments with a pure chloride of carbon confirm the supposition of its anæsthetic powers, and it be pleasant and safe in use, it will be generally employed, as it can be prepared on a large scale at a very small cost.

To question four, Mr. N. sums up his answer by referring to what has already been said in reference to the effects of each article, and the general statement that the same dose of an anæsthetic (with one exception—hydrocyanic acid), when taken into the stomach, does not produce the same effect as when inhaled. Mr. N. believes this difference to depend solely upon the greater extent of surface with which these agents are brought into contact when inhaled, and their being in a state of vapour. In regard to the uniformity of result from similar doses and modes of administration, Mr. N. remarks, that there is considerable variation in different individuals as to their susceptibility to the influence of these agents—one individual being far more easily affected than another. The very young animal will bear, not only a proportionably, but positively a larger quantity than the adult; while an older, but not an adult animal, will not bear the quantity which an old one of the same species will. Moreover, at different times, the same animal is far more susceptible to the influence of them than at another. Hysterical females, and lively excitable animals are much more susceptible to the action of these agents than the unexcitable and phlegmatic.

The quantity of any anæsthetic which is inhaled in a given time is of the utmost importance; *cæteris paribus*, the more concentrated the vapour, by far the greater is the danger. Given slowly, the same animal will inhale at least twice the quantity without dangerous symptoms, that, if inhaled very rapidly, would be not unlikely to cause death.

In reply to question five, Mr. N. remarks:—

"Though, without doubt, in every single case, we cannot control the effect, yet, as a general rule, it may be affirmed that we can both judge of the effects and control the point at which we wish to arrest the influence of these agents, provided due care be used in administering them."

"To insure safety, the two principal points to be attended to in the administration of an anæsthetic are the quantity used alone, and the temperature at which it is given; of course, the higher the temperature the greater the quantity of vapour generated in a given time. It is of the utmost importance to take care that the vapour is not so concentrated as to produce a very sudden impression, or the nervous energy may be so suddenly and completely suspended that the heart at once ceases to act."

Mr. N. thinks it a very common error, that of carrying the anæsthesia too far. In order that no sensation of pain should be produced, it is not necessary to render the patient so utterly powerless as to be altogether unable to stir. This, he adds, is a point of especial importance in the practice of midwifery.

"If it be determined to use an anæsthetic agent, in a case of parturition, that one should be selected which gives rise to the least depression, either temporary or permanent, and that in all cases especial care should be taken to give as little as possible. It is rarely, indeed, necessary to produce unconsciousness, which is rather prejudicial than not, by suspending the pains and retarding labour; a dreamy condition of half conscious obliviousness is, unless there be some considerable manual interference required, all that it is either necessary or desirable to produce. The plunging the woman into a profound state of unconsciousness has, I am convinced, often been productive of the worst and most fatal consequences."

Nothing, according to Mr. N., taking all things into consideration, answers so well for the administration of the anæsthetic agents as a large, moderately fine linen handkerchief, folded first into quarter size, and then into a funnel shape. While it retains quite sufficient of the fluid, it does not obstruct the free ingress and egress of air, consequently the process of respiration is but little disturbed.

"The first indication of an animal being pretty well under the influence of the agent is the deeper, fuller, and more prolonged respiration; he inhales as though it were pleasant to do so. This is not always observed, though it very frequently is. At first there is some little excitement, and a disposition to move, the pulse is rather fuller and quicker, the pupils somewhat contracted, and the eyes wandering; there is often incoherent talking; these symptoms speedily pass off, and loss of volition, and indisposition, or inability to move comes on; the eyes become upturned, the pupils dilated, the pulse smaller, the muscles flaccid, and unconsciousness and insensibility ensue. If the quantity of vapour be now lessened, the respiration becomes more free and natural; if not, it will be laborious, and presently almost or entirely cease. The lips become closed, and in expiration, the cheeks may be distended by the air, which in escaping may produce a blowing noise. This I regard as a certain sign that the system is so fully under the influence of the anæsthetic as to border upon danger. At this point, or before (for the last symptom is by no means invariably present, the mouth being often open instead of closed), the pupils are widely dilated, the limbs become as flaccid as possible; there is no reflex action, the urine or feces, or both, may involuntarily escape, the conjunctivæ and the lining membrane of the mouth—often indeed the whole countenance, become pale and bloodless; the heart may be perceived acting most rapidly, with a short, feeble throb, the pulsation in the arteries being scarcely, if at all perceptible, and the respiration becomes either very quick and inefficient, or slow and gasping. If this entirely stops for any length of time, even though the heart may be felt still to move, recovery will be doubtful. In operating, if the surgeon should find the flow of blood to cease, he ought *immediately* to be on his guard, as this may indicate such a condition of anæsthesia as to seriously compromise the heart's action; and if the inhalation be carried farther, might be fatal."

According to Mr. N., we may easily prevent the vapour from being inhaled at first in too concentrated a condition, by not putting the handkerchief in the first instance too closely over the face; or, if an apparatus is used, by opening the air valve. If there be no excitement, we are not to increase the strength of the vapour; but if there be excitement, then by applying the handkerchief more closely, or by shutting the valve, to terminate this by more fully and quickly bringing the system under the full influence of the agent, but taking care that, so soon as there are indications of unconsciousness and insensibility being produced, in a great degree to withdraw the anæsthetic, and only to give such a diluted vapour as shall just suffice to keep up the condition of insensibility, which, when once produced, may be usually maintained by a very moderate quantity of vapour; for it must be borne in mind that the *full effect* is not always *instantly* produced as the vapour enters the lungs, nor do the effects always immediately pass off; indeed, the rapidity with which the effects disappear does not always correspond with their intensity.

"If," remarks Mr. N., "these directions be attended to, rarely will death be occasioned by either ether, chloride of olefiant gas, or chloroform, although, as I have before stated, chloroform I consider to be the most dangerous of all; yet even of this, when due care is exercised, experience has shown the danger not to be very great."

Mr. N. adds that it is of considerable importance the stomach should not be distended with food; if it be, vomiting is much more likely to be caused, and he thinks a fatal result more likely to be induced in such a condition. In several of the animals in which a small dose destroyed life, the stomach was found distended with food recently taken.

In reply to the fifth query, Mr. N. observes that he considers safety in the administration of anæsthetics is rather to be found in guarding against the exhibition of an overdose than in seeking for an antidote or remedy against the effects of it.

"If an antidote of much value exists, it has yet not been discovered; of the remedies proposed, no one appears to possess any great power in such a condition of things as would call for its employment. It is true, *agitation, cold affusion, a cold stream of air*, perhaps *electricity or galvanism*, and *some other stimulants*, will expedite the process of rallying where the depression is not very profound; so, also, it is possible that *venesection*, by lessening the pressure of the column of blood upon the walls of the heart, especially the right, may, when this organ is still acting, facilitate its contraction, and thus assist in restoring the circulation; at the same time, it is by no means certain that, with such a depression as exists in the nervous energy, the abstraction of blood may not in itself tend to increase, or, at any rate, to prolong this condition, precisely as it would do in syncope, to which state it appears not improbable that induced by anæsthetics bears some considerable analogy; and this analogy would seem to point out the horizontal as the proper position for a person in such a state to be placed."

"In the great majority of cases, so long as the heart acts, and respiration at all goes on, the mere withdrawal of the anæsthetic is followed by the restoration of the functions, and therefore the question forces itself upon us as to the positive value or not of *any* of these means. If the heart has ceased to act, no blood will flow on a vein being opened. If respiration has ceased, and the heart does not move, *galvanism*, though it may make the voluntary muscles violently contract, only does this by the sooner exhausting their power to do so, without in any way restoring the vital functions. *Oxygen*, of course, if there be no respiration, cannot be taken into the lungs, and the performance of artificial respiration with it would be both difficult and incomplete, even were it at hand, which it would not in the great majority of cases be, while, so far as experiment and chemical action goes, it does not appear that, if it were ever so fully inhaled, even in combination with the anæsthetic substance, it would in any manner prevent the development of full anæsthesia, and therefore it cannot be for a moment imagined it would in any way counteract the effects when they are developed. *Ammonia* we have seen to be useless and inert, whether given mixed with the substance, or after its effects were produced. The coldness and depression which in so marked a degree are present do not encourage us in the supposition that either *cold water* or *cold air* to any very great extent would be useful—a conclusion which the experience of their effects confirms. We are therefore reduced to seek just that assistance from their use as shall suffice to produce such a moderate shock, if the nervous system be capable of receiving any, as may cause a reaction and rousing of its powers, by which the heart and respiration may again be set in motion, or rendered more vigorous. This appears far more likely to be accomplished by the sudden dashing of a small quantity of cold water upon the face and chest, possibly alternating with heat to the latter, or such a moderate stream of air as may be produced by a fan, and not too violent agitation of the body, than by excessive violence, or by entire and long-continued immersion. A moderate interrupted compression of the chest, and pressure upwards of the abdominal viscera, should not be neglected, as tending to change the air in the lungs, and thus to get rid of the vapour there remaining; or, with the same intention, a stream of air might be, not too forcibly, blown through a small tube into the larynx for a minute or two."

Our readers, we are convinced, will not be displeased at the length of our analysis of Mr. N.'s most interesting communication. Anæsthetic agents are now extensively employed in every case where the occurrence of severe pain is anticipated. And the manner in which their bold and fearless administration is spoken of by some is certainly calculated to lead the inexperienced and incautious into the belief that the production of anæsthesia is attended with little or no danger, whatever may be the circumstances under which it is induced, the agent that is employed, or the quantity that is given. Beneficial as the results to be derived from the induction of anæsthesia in many cases unquestionably are—nevertheless, to derive from it all the good it is calculated to afford, with the least possible risk of danger to the patient, the proper practical application of all the anæsthetic substances becomes a most important question, and one that deserves to be well and thoroughly investigated. For having commenced in the proper manner this investigation, our thanks are due to Mr. Nunnely. The general conclusions he has deduced from his experiments are of no trifling importance, and with them every physician should be made acquainted. This, so far as our circulation extends, we have now endeavoured to do; and though our extracts from the communication of Mr. N. have been somewhat long and frequent, we cannot close this notice without still further extending it by quoting his very forcible language in reference to *chloroform*.

"It is," he remarks, "of all the anæsthetics with which I am acquainted (with one exception), one of the most, if not the most agreeable, and at the same time it is possessed of very considerable power. It is for the most part pretty constant in its action; but I am also bound to add, it is one which requires more care in its administration than most of the others, and I would venture to say much more than has always in practice been exhibited. It is true that many fatal cases in which it has been given are known, but, I am firmly convinced, there are many more fatal cases which have not been reported. Even in those cases which have come to light, all sorts of explanations, and attempts to explain away the true cause of death, have often been attempted, rather than admit the fact of the person having been killed by the chloroform. This is, perhaps, scarcely to be wondered at, as the admission of the fact would be almost like acknowledging being accessory to the death of the patient, which most men naturally shrink from. A careful examination, however, of the preceding experiments cannot, I think, but convince any impartial person that, in reality, death in those cases was caused by the chloroform; either from some abnormal condition or peculiar idiosyncrasy, by which the person was rendered unusually susceptible to its influence; or, as I believe, far more frequently from a want of that experience and care in its administration which the exhibitor should have possessed and attended to. When I see statements by medical men that they have 'boldly administered' chloroform in quantities of from six drachms to an ounce and a half at a time without any ill effects, I cannot but congratulate both the patient and the doctor that the rashness in employing such quantities has been equalled by the carelessness in administering it, so that by far the greater portion of the fluid has been wasted by escaping into the air of the room, rather than passed into the lungs of the inhaler, and thus the carelessness of the administrator has, contrary to what generally occurs, and which he would do well not to risk again, been the means of escaping from the effects of his rashness."

D. F. C.

ART. XIX.—*Sleep Psychologically considered with reference to Sensation and Memory.* By BLANCHARD FOSGATE, M. D., Physician to the New York State Prison at Auburn. New York, George P. Putnam, 1850: 12mo. pp. 188.

DR. FOSGATE, in the present essay, has given a very interesting, and in general correct, account of the phenomena of sleep. In his explanation of dreaming, he has, however, advanced a position which he will find it very difficult, if not impossible, to prove. We allude to his postulate that "the mind is *absolutely* sleepless." That during sleep the mental organ is still active—consequently, that we always, strictly speaking, dream—but, when the mental excitement is not so far "exalted as to arouse any of the senses," we do not, upon awaking, retain any recollection of the circumstance; for, according to Dr. F., "we are dependent on external sensation for a remembrance of what passes in the mind in somnolency." Perfect sleep, as defined by Dr. F., is the repose of all those organs of perception by which the mind is connected with the external world, in which state we retain no memory of our dreams, because "any mental operation not based in concurrent outward relation cannot be recollected."

Let us, however, do our author full justice, by presenting a few extracts from his general conclusions.

"Sleep," he remarks, "is a phenomenon of that part of our existence by which we are connected with the external world, and during sleep the mental operations proceed, though modified by its influence. During this state, the mind is restricted in its operations to the stimulus afforded by the activity of the innate powers of the cerebral organization, and as one consequence of this activity, the memory of past events is brought to view. We arrive at this conclusion from those states of mind in which we perceive that bygone circumstances are re-called and associated in the mental process. And, although, in these operations, the mind is brought to a remembrance of what has passed, the memory is not impressed with the thoughts which occupy it, while external sensations do not contribute their stimuli to its operations. To this conclusion we come, from those states of being in which we know that the mind was active while the senses were dormant, and there was no remembrance, on awaking, of what then transpired. From the fact that the mind is active without the stimulus of external sensation, but that without this stimulus there is no memory, and that the perception can be as readily stimulated by the internal as external sensations, we conclude that it is exclusively through the activity of the organs of perception that the memorial faculty is manifested, and that these organs must be approached through the special senses to develop this mental power."

Memory, says Mr. F., "is a mental element manifested through the activity of the organs of perception. It is requisite, however, that these organs receive their stimulus from certain sources, otherwise the memorial faculty will not be impressed. Where they receive their stimulus from the propensities or sentiments, the resulting mental operations are not remembered. From this circumstance, we apprehend, it is that phrenology has concluded the animal organs are not possessed of memory; but whether they are or not, they do not stamp the result of their stimulus indelibly upon the mind.

"Universal experience teaches that what we see or hear, we remember better than what we imagine or read about; because memory is much clearer and more durable when its objects are perceived through the external senses than when it is merely a deduction of the mind, or, in other words, when it is only an intellectual impression."

It is not because in these cases the power to recall by a mental act images or ideas previously acquired—which act constitutes memory—but because the images or ideas which we receive by sight, and hearing, and feeling, are themselves more clear, definite, and durable than are the most vivid and accurate description of the objects, or scenes, or sounds, or sensations, to which these images or ideas relate. But the results of mere mental operations—the compound or modified images or reflex ideas which the mind itself creates—are as readily recalled as are the simple primary impressions received originally through the senses. Witness the mental creations of the poet, the painter, and the sculptor. Here images are recalled and modified, and combined, by a purely mental effort—and these modifications and combinations are again recalled at will by an effort as purely mental as the first.

"The perceptive faculty has three sources of stimulus: viz., through the media of internal and external sensations, and the powers of reflection. The thoughts which follow the impressions of the first, when unconnected with the second, are not remembered; and those flowing from the last, under similar circumstances, are imperfectly retained; but the perception of impressions through the organs of external sense develops the memorial faculty in its fullest power.

"Through perverted or imperfect sensations, perception is so modified that dreaming and insanity singularly harmonize. The perceptions being in consonance with the state of the impressions transmitted, the perception of actual existences is imperfect, and memory fails to recall and associate the past with the present in accordance with reality:—hence some of the incongruous results of the mental operation during these states.

"In old age, the organs of sense lose their nice property of receiving impressions perfectly; consequently, the perceptions are indistinct and the memory of recent occurrences is defective; but the remembrance of circumstances which occurred in times long past, when the senses were intact, is comparatively fresh in the mind. The mental operations that depended upon the internal impressions of those times are forgotten, and only those in which the external senses largely contributed are retained. If memory, as advocated by Dr. Combe, be a mode of activity of the knowing or perceptive organs, and if this activity can be stimulated by the will, then we may possibly account for this peculiar feature of advanced age. Early impressions having been made upon organs in good condition to receive and transmit them accurately to the perceptive faculties, a corresponding effect was there produced. Now volition is little impaired by age, and through this power the mind can at will recall mental perceptions; but the perception of impressions made through impaired organs of communication is so feeble from the imperfection of the instruments employed, that, owing to this feeble perception, there is but little for the will to act upon, and consequently, early perceptions are readily recalled, while those of recent occurrence are indistinctly remembered."

"During sleep, memory may be inactive from absence of external stimuli, and the judgment deranged through the operation of sensations unconnected with outward relations; but the imagination is often stimulated into its wildest fancies by the former, while the restraining influence of the latter is withheld. All the mental faculties are modified in their activity by sleep, because by it a different relation is established. When the mind is sound and the body awake, impressions from without have the controlling influence; but when asleep, the intellectual operations are stimulated by internal influences, or impressions from the affections or feelings,—consequently, a different result must be expected. It appears at least probable that intellectual operations induced by internal causes, are not, under any circumstances, the objects of memory to so great a degree as those produced by external objects. Certain it is that, during that stage of sleep in which the external senses are in abeyance, we know that from internal causes, there is excessive action in the mental organ, without leaving any impression upon the memory. For example, we refer to voluptuous orgasms in sleep, in which, should the excitement be so exalted as to arouse any of the senses, memory retains the circumstance as a dream; but when the exaltation does not reach that pitch, the mind has treasured nothing of the occurrence. Yet in such instances the evacuation is incontestable evidence that mental action did exist, and that the mind was not asleep. Vigorous activity of a propensity or sentiment will stimulate the intellectual faculties to originate mental pictures to gratify the original desire; and in these cases the mental operations are not only diversified but intense—involving the greater part of the mental powers."

We would suggest whether seminal emission during sleep is always the consequence of voluptuous dreams; and, as it certainly is not, this illustration of Dr. F. falls to the ground.

Even admitting as correct all that he contends for as to the connection between memory and external sensual perception, does it prove that the mind never sleeps—in other words, that the mental organs are incessantly in a state of activity? Can any one suppose that, during the entire absence of all consciousness which constitutes profound sleep, the mental faculties are still in exercise? It will not do to say that they appear to us to be dormant because we retain on awaking no memory of their operations; and that this want of memory is owing to the complete repose of the external senses. We will not say that the fact must be proved, for it is unsusceptible of proof either direct or analogical. We know that a state of profound sleep is a state of utter unconsciousness; that all the phenomena of existence save those which are within the domain of the nerves of organic life, and a few reflex actions, temporarily cease. Now is it to be supposed that in such a state as this the operations of mind go on, even in a modified degree or manner? We infer that the mental organs as well as the animal, demand an alternation of repose and action—that sleep is as necessary to the one as to the other, from the fatigue which invariably ensues from too prolonged mental efforts—and from the fact that constant mental activity is known to be incompatible with the health and integrity of the brain. But there are different degrees of sleep. With a perfect interruption of any conscious relation to the external things by which we are surrounded and the circumstances in which we are placed, certain of the mental faculties may be in action; by these mental images may be revived, varying according to the portion or portions of the brain which may at the time be active, sometimes producing simple and congruous images, but at others a more absurd, incongruous, and impossible succession of mental phantasmagoria than almost the wildest imagination could conjure up during a state of wakefulness. In many cases, images are awakened in the mind during sleep by external impressions upon the half dormant senses, without external consciousness being aroused; nay, even the voluntary muscles may be put in action and the sleeper made to walk and to perform many of the ordinary acts of life through the agency of mental images, while external consciousness is still dormant.

In what are properly termed dreams, the reasoning faculties are never active. We never in our dreams attempt to compare and arrange the discordant images which dance before the mental vision. The most absurd and incongruous positions in which, while dreaming, we appear to be thrown; the fantastic shapes which surround us; the rapid change of scene; the annihilation of time and space, never excite in us the least surprise. Reason never asserts her province and resolves into its true elements this "baseless fabric of a vision." We never reason in our dreams. But we experience fear, horror, disgust, pleasure, and, contrary to what should be the case if Dr. F.'s views in relation to memory were all correct, we recollect the sensations in connection with our dreams when we awake. It is true that we sometimes feel conscious of having dreamed, without being able to recall any of the imagery of our dreams; because the activity of the mind was so slight, that it did not reproduce vividly the images of which the dream was composed.

We admit that, in the absence of external consciousness, whilst the external senses are inactive, heeding not their appropriate stimuli and conveying no impression to the brain, the whole of the intellectual powers may be in active operation—that the mind may reflect and reason. It is in such a state of mental abstraction that the philosopher weighs and compares his facts, and on them builds his theories; it is in such a state the poet creates his ideal world and peoples it with "beings which had no corporeal birth;" and it is in such a state the painter forms those images and scenes he afterwards produces on the canvas. But it would be incorrect to call such a state one of sleep in a proper physiological sense. In sleep, we never reason, and the images then formed, if we were to attempt to describe them in verse or transfer them to the canvas, we should find to be, as Dr. Parr remarks, "a thing of shreds and patchwork, composed of the heterogeneous and disjointed vestiges of ideas previously received through our senses."

We had intended to notice the illustrations of his subject which Dr. F. has drawn from the subject of mesmerism; but we must now pass over this part of the essay, with the sole remark that our belief in the reported wonders wrought by mesmeric influence falls very short of that professed by him. We cannot believe, we have certainly seen no fact calculated to prove to us, that mesmerism, or, as Dr. F. denominates it, *animal magnetism*, "holds a controlling power over both mind and body."

While we deny that the mind is active during sleep, or that memory has control only over the images derived through the external senses; still we would remark that, admitting the inaccuracy of both these propositions, they but slightly impair the correctness of the views advanced by Dr. F. in reference to the *phenomena* of dreaming, for here it is true that a portion at least of the mental functions are active, while the external senses in common with the organs of animal life are dormant. D. F. C.

Art. XX.—*Notes of a Recent Visit to several Provincial Asylums for the Insane in France.* By John Webster, M.D., F.R.S., Fellow of the Royal College of Physicians, Consulting Physician of St. George and St. James's Dispensary, &c. London, 1850: pp. 35.

This interesting pamphlet is the production of a distinguished member of the medical profession, whose writings are well known in this country, and who has devoted much attention to mental diseases, and been particularly interested in preparing the public mind for a much larger amount of clinical instructions in institutions for the insane than has been heretofore permitted in any part of Great Britain. In the prosecution of this object, he has made several visits to the French hospitals, and in the paper before us, which was originally published in the "*Journal of Psychological Medicine,*" he gives a highly interesting account of his last tour, and a large amount of information, in reference to many of these institutions, not to be found elsewhere in so small a compass. The present report has reference only to eight provincial asylums, while those in Paris, which are most generally known, are referred to only cursorily.

The asylums visited will be briefly referred to. First in order is that of *Bon Sauveur at Caen*, which, besides being an asylum for lunatics of both sexes, is a religious establishment, containing a large population which is thus officially noticed. 1. The choir and lay-sisters, consisting of two hundred and thirty-seven individuals. 2. There are five priests, composed of the superior and four chaplains. 3. Twenty-six free boarders, all resident; twenty being ladies, and six gentlemen. 4. The deaf and dumb, of which there are one hundred and fifty-five, comprising sixty-five males, and ninety females. 5. The resident domestics amount to one hundred and twenty-eight, of whom sixty-eight are males, and sixty females. And lastly, six hundred and ninety-two lunatics, of whom three hundred and two are men, and three hundred and ninety women. Besides these, there are also two physicians, and eighty new resident work people; so that one thousand three hundred and twenty-five individuals actually belong to this great establishment.

St. Meens Asylum near Rennes, with a fine situation, has an old building not constructed for, or adapted to, the purpose for which it is now used. "Even the best part looks more like a prison than a lunatic institution, having strong iron bars in the windows," and in other respects not suitable for the reception of the insane. During the year 1849, ninety-one patients were admitted, thirty-seven were discharged cured, and forty-nine (twenty-one by cholera) died. When visited by Dr. Webster, there were three hundred and eleven patients in the house, of whom one hundred and forty-three were men, and one hundred and sixty-eight women.

Nantes Asylum forms one division of the "Hospice Général" of the city of Nantes, and although the arrangements of the buildings appropriated to the insane are considered admirable by Dr. Webster, one of the best indeed throughout France, he regards the situation as highly objectionable. The total population at the time of his visit comprised one thousand one hundred and ninety-six individuals, viz., 1st. One hundred and ninety insane old men, and two hundred and sixty-five women of the same description. 2d. Twenty-five deaf and dumb persons. 3d. Fourteen male and female boarders. 4th. One hundred and sixty-one orphans or foundlings. And lastly, three hundred and ninety-one lunatics; to which must be added, one hundred and fifty individuals who compose the staff of officers. During the year 1849, one hundred and twenty-six patients were admitted, fifty were discharged cured, and one hundred (sixty-one by cholera) died.

St. Gemmes Asylum, near Angers, is built upon a rock close to the Loire, above three miles from the city of Angers, and is appropriated exclusively to lunatics. When certain improvements now in progress are completed, Dr. Webster believes this "will become a first-rate institution." This asylum differs from the others noticed in having the resident physician the superintending director; and, as might be expected, the discipline pursued was much better than in the establishments having a different organization.

In the asylum were three hundred and forty insane; one hundred and sixty-one being males, and one hundred and seventy-nine females. During the year 1849, one hundred and twenty-six patients were admitted; seventy-one were discharged cured, and seventy (sixty-two by cholera) died.

The *Asylum at Le Mans*, "of all the public establishments for the insane recently visited" by Dr. Webster, "gave him the most satisfaction." This asylum contains two hundred and fifty-eight patients; one hundred and twenty-four males, and one hundred and thirty-four females. During the year 1849, seventy-four patients were admitted, thirty-five were discharged cured, and sixteen (none of cholera) died. This institution has only one physician, who resides within its precincts, and gives his time and exertions solely to the duties of his office.

Asylum at Blois. This institution is not yet completed, but will ultimately accommodate three hundred and fifty insane patients. Its general plan somewhat resembles that at Le Mans. During the year 1849, eighty-six patients were admitted; twenty-three discharged cured, and fifteen ("several" of cholera) died. The actual number in the asylum, when visited by Dr. Webster, were one hundred and twenty-four; sixty being expected to arrive in a short time, and for whom the directors were already prepared. The resident physician is also director, and labour is here used as a remedy to an extent far beyond what is common in other institutions, without any accident having ever occurred.

The *Orleans Asylum* is situated in the city of Orleans, and so surrounded by houses on almost every side that from many of their upper windows conversation can be held with the patients in the court-yards below. It is a part of a general hospital, the entire community being composed of, 1st. Three hundred and ten paupers. 2d. A civil hospital with three hundred patients. 3d. Eighty orphans. 4th. A receptacle for diseased "filles publiques." 5th. The lunatic asylum containing five hundred and twenty-one patients. The total population, including resident official and domestics, amounted to one thousand five hundred and fifty individuals. During the year 1849, one hundred and thirty-seven insane patients were admitted; thirty-one were discharged cured, and ninety-three (thirty-two by cholera) died.

Saint Yon Asylum is near the city of Rouen, the ancient capital of Normandy, and is reported by Dr. Webster as being not only one of the largest, but also one of the best conducted in France. It contains seven hundred and twenty-nine insane patients, of whom two hundred and sixty-one are males and four hundred and sixty-eight females. During the year 1849, two hundred and four patients were admitted; seventy-six were discharged cured, and one hundred and nine (thirty-three of cholera) died. As seem to be the tendency even when the wards of this institution were most inconveniently crowded.

No one can read this report of Dr. Webster without being struck with the frequent mention made of the noisy and excited state of the female patients, and not less so with the large amount of restraining apparatus now in use in nearly every institution which he visited. In the eight Provincial asylums visited by Dr. Webster, in 1850, and which contained a total insane population of three thousand three hundred and sixty-six, he found one hundred and sixteen under restraint, and of these the proportion of females was considerably greater than of males.

The great progress made in France, within a few years, in reference to the nature, pathology, and treatment of mental diseases, is referred to with commendation, and the regret which we have often felt is fully participated in by Dr. Webster, that of all the regular reports made by the physicians of the various asylums in that country, few if any are printed, but, "like many other public papers, become buried in the archives of the prefectures," the minister's bureau, or consigned to unmerited oblivion in some similar receptacle. It must also be quite obvious, from the details given of the medical staff in most of these institutions, that the physicians who devote their time and talents to these institutions, are not liberally or at all adequately paid for their services, while in not a few there is no proper provision made for the requisite number of medical officers.

Dr. Webster's familiarity with institutions for the insane makes his remarks in reference to the general mode of treatment, and especially in reference to the necessity and effects of restraining apparatus, interesting and valuable. He believes, as we do, and illustrates the truth of his belief from statistical facts, that the frequent use of restraint tends rather to increase than diminish noise, violence, accidents, escapes, and even suicides.

The importance of giving some amount of clinical instruction on insanity is generally recognized, and Dr. Webster's observations lead him to believe that no objection exists to such a course in large pauper institutions, and that no more injury would result to the patients from a class of students passing through the wards of such institutions devoted to the insane, than through those of a female hospital.

The study of mental diseases is obviously too much neglected by medical students in Great Britain no less than in this country, and Dr. Webster, in addition to a very pleasing sketch of his foreign tour, has furnished us with a large mass of valuable facts, and a strong argument in favour of this kind of clinical instruction, which cannot fail to be read with interest by the members of the medical profession. T. S. K.

Art. XXI.—*A Practical Treatise on Dental Medicine, being a Compendium of Medical Science as connected with the Study of Dental Surgery.* By Thos. E. Bond, A. M., M. D., Professor of Special Pathology and Therapeutics in the Baltimore College of Dental Surgery. Philadelphia, 1851: pp. 324.

American dentistry is doing everything which the severest criticism can require to establish its claims to the rank of a distinct speciality of medicine. The number and value of its periodicals; the rapid succession of new standard and elementary works which as journalists we have occasion to notice; and the regular and steady increase of its collegiate foundations, challenge for our brethren in this department of the healing art the highest admiration and praise.

The profession styled itself Dental Surgery, while its pretensions were yet limited almost exclusively to the operative and artistic treatment of its subjects; and the earlier books and publications were chiefly occupied with mechanical and chirurgical remedies and appliances; but enlarging experience and deepening reflection in good time liberalized the science, and discovered its broad and general relations to all the departments into which the healing art has been divided for convenience of study and practice.

This book of Dr. Bond is, we believe, the first work published in which the therapeutics proper of dentistry has been systematically separated from its surgery, and recognized and treated in reference to this distinction. It is, at least, from that side of the subject, and by an author, not a practical dentist, but a public teacher of hygiene, pathology, materia medica, and medical practice in their application to the profession. Dr. Bond is specially qualified for this service, and in the book before us, has performed it happily.

The etiology, symptoms, diagnosis, and nature of disease are treated in as many chapters, upon the received principles of medical science and medical practice, in reference to the special topics of his work, with great clearness and ability. Particularly, there are about fifty pages occupied with the morbid effects of dental disease upon the general system, which make the work of the highest value to the general practitioner, and show how large a service the dental surgeons have already rendered to general medicine both in diagnosis and remedial practice. Indeed the work so well performs its double duty to dentist and physician, that we are at a loss to say which is the more indebted to the author for its publication; nor need we, for both need it, and to both we warmly recommend it. We spoke above of Dr. Bond's separation of the medicine from the surgery of dentistry. This must be qualified a little, for he does not *rigidly* observe the distinction which he so evidently feels, and feels perhaps the more that he is not himself a *surgeon* dentist in the strictness of the title. For ten years he has filled the chair of dental pathology and therapeutics, and now contributes nobly by this publication to the stock of knowledge proper to his department; but he has also given a dozen chapters of his work to diseases and treatment of the teeth and their dependencies, which are strictly *surgical*. We make no objection to this, for there are probably good reasons for embracing these chapters in his plan, and his method involves no confusion; but we respectfully suggest, for the consideration of our author in future editions, that a severely scientific division of the several departments of the profession is the step now required for its advances and growth. Nothing is so necessary in the cultivation of science as correct classification. Mental, like chemical analysis, must separate its subjects into their simple elements, before it can fully comprehend or command them. There is a stage of progress which demands exactitude of system and precision of nomenclature, and dentistry has reached it. We have spoken, or intended to speak, heartily in praise of Dr. Bond's work. It has unmistakeable excellence of thorough medical science in its subject matter, and of capital authorship in its style and treatment, and the suggestions which we take leave to offer to our author in no respect abate our admiration for him or his performance. We would have been glad to find a chapter *distinctly* and *generally* devoted to constitutional irritation, shocks and sympathetic affections connected with diseases of the teeth, extractions and other operations, and such mischiefs as may result from the various modes of filling teeth, shutting up exposed membranes by capping or otherwise, amalgam fillings, &c. &c. The use of chloroform and other anæsthetic agents deserved also, we think, a chapter in a treatise by an author whose position and ability would have given his opinions and instructions so much deserved weight with practicing dentists. Beside these things, which in substance and form concern the interests of dentistry, there is one error which requires correction, for the sake of professional equity and even-handed justice to the living and the dead. In the article upon "amputation of the lower jaw," at page 275, Dr. Bond correctly credits Dr. Mott with the honor of being the first surgeon who amputated the lower jaw at the articulation; but he quotes Dr. Rees, without correction, for the assertion that after Dr. Mott, who operated in 1821, except M. Cusack, of Dublin, the operation was not "performed by any others until 1842." We have before us "Cooper's First Lines of the Practice of Surgery," in which a detailed statement of the operation, as performed successfully by Dr. Geo. McClellan, of this city, in 1823, is given; accompanied with a handsome engraving of the appearance of the patient before and after the operation, and of the jaw and tumour which were removed.

Dupuytren, as early as 1812, exsected a portion of the under jaw, and Dr. Deadrick, a surgeon of Tennessee, was two years before him in the same bold operation. Originality in surgery, in medicine, is not always easily ascertained, nor is it worth quite all the fighting which it has occasioned; but justice ought to be done as nearly as it can be, in all cases. Some editors and annotators have taken so much pains to depreciate their rivals and cotemporaries, that unsuspecting writers who follow them are sometimes unconsciously made to repeat the injustice which they would not willingly commit. Dr. Bond has been cautious enough to give his authorities for his statements, and so made *them* responsible for their truth. We make room for the following extract from the work which we have been noticing, and give it for its valuable hints to practicing physicians, and as a specimen of our author's style of treating his subject. "That diseased conditions of the teeth and the structures adjacent to them, do exert a most pernicious influence upon the general health, is a fact as well established as any other medical observation; yet the medical profession are, with very few exceptions, entirely unaware of it. We are not apprised that the subject is ever alluded to by lecturers on the practice of physic, when recapitulating to their classes the causes of functional disturbance and constitutional suffering; it is not noticed in the many text-books in practice; and, certainly, however frequently the physician may look into the mouths of his patients, it is very rarely that his comprehensive glance perceives anything worthy of note in the decaying organs of mastication. It is full time that practitioners of medicine should perceive the importance of the teeth and of their diseases; but, until they do so, it is the more important that the dentist should be able to point out the causes of obscure disease, which the physician has in vain endeavoured to discover, simply because he has sought for it everywhere but in the right place. It might be granted, *à priori*, that, if physiological conditions of the teeth, owing to their peculiar position, association, and history, may exercise powerful influence upon the health of other organs, pathological conditions of these same teeth cannot be entirely harmless. Again, if we would examine the structure of a tooth, and perceive how completely its sensitive part is enclosed in an unyielding bony case, we might readily infer, from the consequences of compression in other parts, that the swollen and inflamed pulp, &c., would be exceedingly painful. If, too, we would regard the close connection existing between the teeth, the rapidity with which the flash of sympathetic pain darts along the nervous cords which vitalize them, and the intolerable and protracted suffering which ensues upon even trifling irritation of these sensitive filaments, and remember that pain itself is fully capable of deranging the whole economy, and inducing serious and fatal disorder, we might, without the aid of much reflection, adopt the very rational conclusion that the diseases of the teeth must be of considerable consequence to the entire organization. We might, also, with similar propriety, conclude that the teeth were not made merely for ornament, and that mastication and insalivation are something more than mere forms of introduction to the stomach; that they are important to digestion, which is important to the entireness of organs and the performance of function; and that if mastication, and the insalivation accompanying it, be imperfectly performed, some corresponding imperfection of digestion must result. We might also infer, from the known consequences of long-continued morbid influences, however unimportant in their immediate action, that disturbance of digestion constantly repeated, must, in time, develop evils of a serious character." E. T.

Art. XXII.—*Address before the American Medical Association, at the Anniversary Meeting in Cincinnati, May 8th,* 1850. By John C. Warren, M. D., President of the Association. Boston, 1850: 8vo. pp. 65.

This address is elevated in tone, and replete with useful information. Such would be expected in any production by its venerable author. The late President of the Association is, indeed, one of the brightest ornaments of our profession at the present day; a distinction to which he is fully entitled not only from his numerous and brilliant achievements as a surgeon, and the important contributions he has made to the improvements of our art, but also from the faithfulness with which he has invariably upheld the dignity and standing of our calling, and the bright example he has set of illustrious character. Arrived now at an age when most men seek repose, he still labours with all the zeal of youth for the advancement of our science, and incessantly occupies himself with laying open to his brethren the rich fruits of his long and ripe experience.

"Standing, as I do," remarks Dr. Warren, "on the verge of professional life, and quitting perhaps the last official station I may be called upon to occupy, I naturally turn back to survey the course I have passed through, with a view to discover whether there is anything in it which may be interesting and profitable to those who are to follow."

Influenced by this noble and liberal sentiment, the author gives us graphic sketches of the eminent men he has met with during his professional career, comprising most of those who have shed lustre on our science during that period, and concludes his address by notices of the principal improvements in Medicine in the latter years of the last half century—the microscope, lithotrity, tenotomy, cold water, and ether.

We earnestly commend this address to the attention of the profession.

Art. XXIII.—*New Remedies, with Formulæ for their Administration.* By Robley Dunglison, M. D., Prof. Inst. Med. &c., in Jeff. Med. Coll. Sixth edition, with extensive additions. Philad., Blanchard & Lea, 1851: 8vo. pp. 755.

The fact of this work having gone to a sixth edition affords sufficient evidence that it has been acceptable and serviceable to the profession. It indeed comprises a vast amount of highly useful information, compiled from various sources, and most of which is not accessible to the mass of physicians. The present edition has been carefully revised, and largely augmented by the numerous additions made to our therapeutic agents within the period that has elapsed since the publication of the previous edition.

"The last few years," the author remarks, "have been rich in valuable gifts to Therapeutics; and amongst these, ether, chloroform, and other so called anæsthetics, are worthy of special attention. They have been introduced since the appearance of the last edition of the '*New Remedies.*' Other articles have been proposed for the first time, and the experience of observers has added numerous interesting facts to our knowledge of the virtues of remedial agents previously employed. To include all these, it has been necessary to add very greatly to the dimensions of the present edition.

"The therapeutical agents now first admitted into this work, some of which have been newly introduced into pharmacology, and the old agents brought prominently forward with novel applications, and which may consequently be regarded as *New Remedies*, are the following: Adansonia digitata, Benzoate of Ammonia, Valerianate of Bismuth, Sulphate of Cadmium, Chloroform, Collodion, Cantharidal Collodion, Cotyledon Umbilicus, Sulphuric Ether, Strong Chloric Ether, Compound Ether, Hura Braziliensis, Iberis Amara, Iodic Acid, Iodide of Chloride of Mercury, Powdered Iron, Citrate of Magnetic Oxide of

Iron, Citrate of Iron and Magnesia, Sulphate of Iron and Alumina, Tannate of Iron, Valerianate of Iron, Nitrate of Lead, Lemon Juice, Citrate of Magnesia, Salts of Manganese, Oleum Cadinum, Arsenite of Quinia, Hydriodate of Iron and Quinia, Sanicula Marilandica, and Sumbul."

It will thus be perceived that the additions to the present edition have not only been numerous, but important, and to increase the practical value of the work to the therapeutical inquirer, the author has added to the index of diseases the particular pages in which the various remedies prescribed in those diseases are referred to.

Art. XXIV.—*On Diseases of Menstruation and Ovarian Inflammation, in connection with Sterility, Pelvic Tumours, and Affections of the Womb.* By Edward John Tilt, M. D., &c. &c. New York, Saml. S. & Wm. Wood, 1851: 12mo. pp. 286.

We have so recently recorded our favourable opinion of this work (see No. of this Journal for Oct., 1850, p. 401 *et seq.*) that it will be sufficient, on the present occasion, to announce its reprint in this country, and to recommend it to all who are interested in the subjects of which it treats.

Art. XXV.—*First Principles of Medicine.* By Archibald Billing, M. D., A. M., F. R. S., &c. &c. Second American, from the revised and improved fifth London edition. Philad., Lea & Blanchard, 1851: 8vo. pp. 246.

Few medical works have been received with greater favour than that, the title of which heads this article. It has gone through five editions in England and two in this country, and is now recognized as one of the classics of our professional literature. It is sufficient, under these circumstances, to state that the present edition has been carefully revised by the author, who has profited by the criticisms he has received, and endeavoured to render the work more worthy of the patronage of the profession.

Art. XXVI.—*Review of Chemistry for Students, adapted to the Courses as taught in the principal Medical Schools of the United States.* By John G. Murphy, M.D. Philadelphia, Lindsay and Blakiston, 1851: 12mo. pp. 328.

The above work purports to be an aid to the student of medicine in reviewing the subject of chemistry, for the purpose of refreshing the memory in the elementary and important points, and not as a substitute for more elaborate treatises, or as a text-book to accompany a course of lectures on this branch. The author, having experienced the difficulties which meet the medical student under these circumstances, desires to lighten his labour, and offers an abbreviated treatise, comprehending the principal facts in relation to the elementary bodies and their most important compounds. This the author has accomplished in a satisfactory manner, and the student will no doubt find his advantage in embracing the opportunity offered of lessening labour and saving time, especially at periods when the review of all the branches taught in the schools makes this latter a point of considerable importance. In thus noticing favourably the scope of the work and manner of its general execution, it still is necessary to allude to points of minor importance, which the author, perhaps from want of practice, has allowed to escape his attention. These are principally in the use of symbols, in which no error or difficulty could arise to the advanced student, but it might produce some confusion in the mind of the beginner, by whom this work would perhaps be used as a text-book, although such is not the design of the author. Thus the typographical errors Co_2 So_2 So_3 have been allowed to stand for CO_2 SO_2 SO_3, and the symbol Pt. has been adopted without any mark of distinction to express proteine, the same symbol having been previously used to signify platinum. These are, however, so few in number, as not materially to affect the value of the work as a whole, or to detract from the favourable opinion previously expressed of its utility as an assistant, under the circumstances in which it is designed to be used. R. B.

ART. XXVII.—*The Uses and Abuses of Air; showing its Influence in sustaining Life, and producing Disease; with remarks on the Ventilation of Houses.*

THIS is a very neat duodecimo of about two hundred and fifty pages, prepared for popular use, and published by J. S. Redfield, of New York, in his series of "*Tracts for the People.*" It is filled with interesting and practical information upon the important topics of the relations of food and air to our bodies, and the great advantages resulting from a knowledge of these, in order to secure that greatest earthly desideratum, health. The numerous coloured illustrations, exhibiting apartments with the means of warming and ventilating, add greatly to the value of this excellent little treatise, which deserves the most extensive circulation. G. E.

ART. XXVIII.—*Consumption of the Lungs, or Decline; the Causes, Symptoms, and Rational Treatment, with the means of Prevention.* By T. H. YEOMAN, M.D. Revised by a Boston Physician. Boston & Cambridge, J. Monroe & Co., 1850: 12mo. pp. 103.

THE nucleus of this small volume was, we are informed by the author in his preface, a series of papers published in 1847 in a London periodical of considerable circulation. The essay comprises a concise but very sensible sketch of the general history, course, and terminations of tubercular phthisis—the habits and conditions of life which tend to develop or to arrest it; together with an account of the treatment that has been found, by experience, most useful for the control of certain of its symptoms, and best adapted to check its onward and fatal course.

There is scarcely anything to be objected to in the views advanced by Dr. Yeoman in reference to either of the points embraced in the present essay. He has not taken up his pen for the purpose of promulgating any novel doctrine as to the nature or cause of the disease—nor to advocate any special mode of treatment or particular remedy for its cure or prevention. He has merely presented a plain, sensible *resumé* of what the results of investigation and experience have taught us in regard to the pathology, etiology, prophylaxis, and management of tubercular phthisis, and as such it may be read with interest, and we are convinced with some profit, by the medical student and junior practitioner. The work, however, is too concise and limited in its details to afford all the information in relation to the important disease of which it treats required by the physician to enable him to arrive at a correct diagnosis in the early stages of phthisis, or to determine upon the proper course of medication or regimen demanded by each particular case that may present itself for his judgment. The treatise was not, in fact, intended for the use of the profession—but for the instruction of the general reader. We very much doubt, however, whether as a popular work it is calculated to do much good. It is questionable whether the few predisposed subjects its sound hygienic precepts may save from the occurrence of an attack of consumption, or the still fewer patients in whom the disease has already developed itself, the very sensible remedial measures laid down by the author, shall guard, for a time, from its rapid progress, will compensate for the actual mischief it is calculated to inflict upon the non-professional reader, by leading him into the vain belief that he can detect, with certainty, in his own person, or in the members of his family, the primary stage of so insidious a disease as pulmonary phthisis—or translate, with sufficient accuracy, the true import of each symptom as it develops itself, so as to resort with safety and effect to the remedies—medical or hygienic—which it calls for. It will be very apt to lead one class of its readers into a fatal security as to their actual freedom from pulmonary tuberculosis, and unnecessarily to alarm another class by inducing in them the belief that they are actually its subjects, when such is not the case.

If to succeed in the practice of medicine—that is, in the proper adaptation of the principles of pathology and therapeutics to individual cases—requires not only that years should be spent in the acquisition of those principles, and their clinical application, but habits of close application, educated with particular reference to diagnosis and the application of remedial agents to arrest the progress of disease, or to control its leading symptoms in the special cases and circumstances under which it may present itself, it must be evident that any attempt to teach, by popular treatises, the domestic management of any disease must necessarily be a failure, if it do not lead, in too many instances, to prejudicial and even fatal results. D. F. C.

Art. XXIX.—*An Appeal to the Public in behalf of a Hospital for Sick Children.* London, 1850.

This is a very strong appeal, and we trust it will prove to be a successful one, in favour of an institution, the want of which, in any large town, is a glaring deficiency in the list of its medical charities, and must of course be eminently so in so large and densely populated a city as London.

From the investigations of a committee of the Statistical Society, it appears that the whole number of children under 10 years of age, in all the hospitals of London, in Jan. 1843, was only 136, and, of even this small number, 41 had been admitted in consequence of accidental injuries, and 69 for surgical treatment, so that only 26 were suffering from internal diseases. When it is remembered that more than one-third of the whole population of London are cut off during infancy and childhood, it must be manifest that much misery results and many lives are lost for the want of such a charity as the one proposed. Such an institution would not only afford comfort to the poor and prolong their lives, but, by affording the means of instruction to the student, and furnishing opportunities for extending the boundaries of our knowledge concerning a class of diseases, frequent in their occurrence, dangerous in their character, and often very obscure in their symptoms, its benefits would be extended to the highest as well as to the humblest classes of society.

Would our limits permit, we could easily show that the objects desired can only be attained by the foundation of a hospital exclusively devoted to the treatment of children; for the diet, the treatment, the nursing, the hours to be observed, and some of the hygienic requirements, are different from those suited to a hospital for adults.